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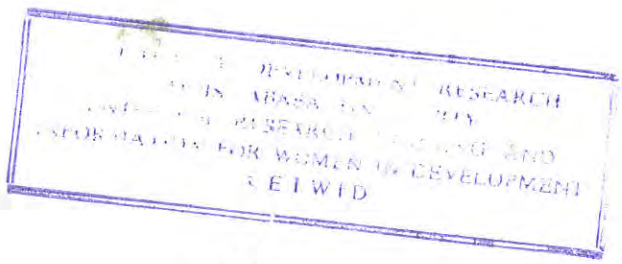
Water and Sanitation Provision and its Effects on Poor Women:
The Case of Selected Neighbourhoods in Addis Ababa



BY
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Nigist Selfu

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Abstract

This study, by taking the case of Addis Ababa, the capital of Ethiopia, investigates the effects of WATSAN provision on poor women. The study was instigated by the observation that the pressure of inadequate provision fall more on the poor than better offs; and among the poor, the problems are intense on women due to biological, economic and socio-cultural factors.

In order to thoroughly examine water supply and sanitation issues affecting poor women in the Addis Ababa context, relevant primary and secondary data were generated and personal observations were made and analyzed. Three poor neighbourhoods (two from the inner-city slums and one from the informal settlements) were identified as case study areas and 120 poor women were selected through a multi-stage sampling method.

Major findings of the study indicate that in the city in general and in the studied neighborhoods in particular unavailability of WATSAN at the required quantity, place, affordability, accessibility and safety has been strongly affecting the lives of poor women. It shows that these interrelated effects highly influence the health, income, privacy, dignity, security, social status of poor women including the time they can use for self improvement.

As the effects are multiple so are the causes. The results of this study show that the roots causes are related to the socio-economic status of women including the rigid division of labour, inadequate access to economic resources and poor decision making power. These coupled with failure to implement the nationally declared gender and poverty policies as well as gender mainstreaming strategies made women arguably the most deprived in human as well as economic terms.

The study concludes that WATSAN, which is one of the most important development challenges facing Addis Ababa, has been affecting the lives of the poorest of the poor who live in the ill-serviced slums and squatter settlements. So, action to improve WATSAN situation is an important step to enable the poor people in general and poor women in particular to escape poverty.

To escape from poverty, among other things, poor women need to be empowered. To achieve this goal, economic growth and financial resources are of course necessary, but they are not enough. This study suggests that by adopting an integrated and multi-sectored approach, by putting poor women's needs at the center of WATSAN service provisions and by enabling them to take part in the decision making and priority setting process it is possible to make a difference.

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List of Acronyms

AACG	Addis Ababa City Government
AACSAB	Addis Ababa Civil and Social Affairs Bureau
AAWAO	Addis Ababa Women's Affairs Office
AAWSA	Addis Ababa Water and Sewerage Authority
CSA	Central Statistics Authority
EPA	Environmental Protection Authority
ESPC3	Environmental Support Project, Component 3
FDRE	Federal Democratic Republic of Ethiopia
FGDs	Focus Group Discussions
GWA	Gender and Water Alliance
GWP	Global Water Partnership
HDR	Human Development Report
IHA-UDP	Integrated Holistic Approach-Urban Development Program
IWRM	Integrated Water Resources Management
lpcd	Litre per capita per day
MDGs	Millennium Development Goals
MOFED	Ministry of Finance and Economic Development
MoH	Ministry of Health
MOWR	Ministry of Water Resources
NGOS	Non-Governmental Organizations
NWDRE	National Water Development for Ethiopia
OPM	Office of the Prime Minister
SBPDA	Sanitation, Beautification and Parks Development Agency
SIDA	Swedish International Development Cooperation Agency
TGE	Transitional Government of Ethiopia
UNCHS	United Nations Center for Human Settlement (UN-HABITAT)
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Development Fund for Women
WAC	Water for African Cities
WAD	Women's Affairs Department
WSS	Water and Sanitation Services
WSSCC	Water Supply and Sanitation Collaborative Council
WATSAN	Water Supply and Sanitation
WWAP	World Water Assessment Program

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Terminologies

Birr	Ethiopian Currency Unit (US $1.00 ≈9.00 Birr)
Kebele	The smallest local administration unit
Neighbourhood	An area or a unit of a Kebele consisting of a number of households ranging from 200-400 that have common physical and social characteristics and share communal facilities such as public taps and municipal dust bins.
Sub-city	Local Administration unit above Kebeles

CHAPTER 1: Introduction

1.1 Background of the study

There are huge variations in levels and meanings of urban poverty and its gender effects in different contexts.

In the literature, poverty is understood as social exclusion manifested in deprivation of resources, opportunity to participate in society, and social support systems such as shelter, WATSAN, security of tenure, and employment opportunities (Brocklehurst: 2004).

As the World Bank Chart (Fig 1.1) shows water and sanitation provision and poverty are closely linked. The lack of clean water and adequate sanitation has devastating impacts on human being. They eat up time as people care for the sick, queue for water or look for toilets. They cost money in medical bills and high charges. They rob people of dignity and emphasize their lack of power. A poor environment is a cause of poverty, and in turn poverty contributes to the poor environment.

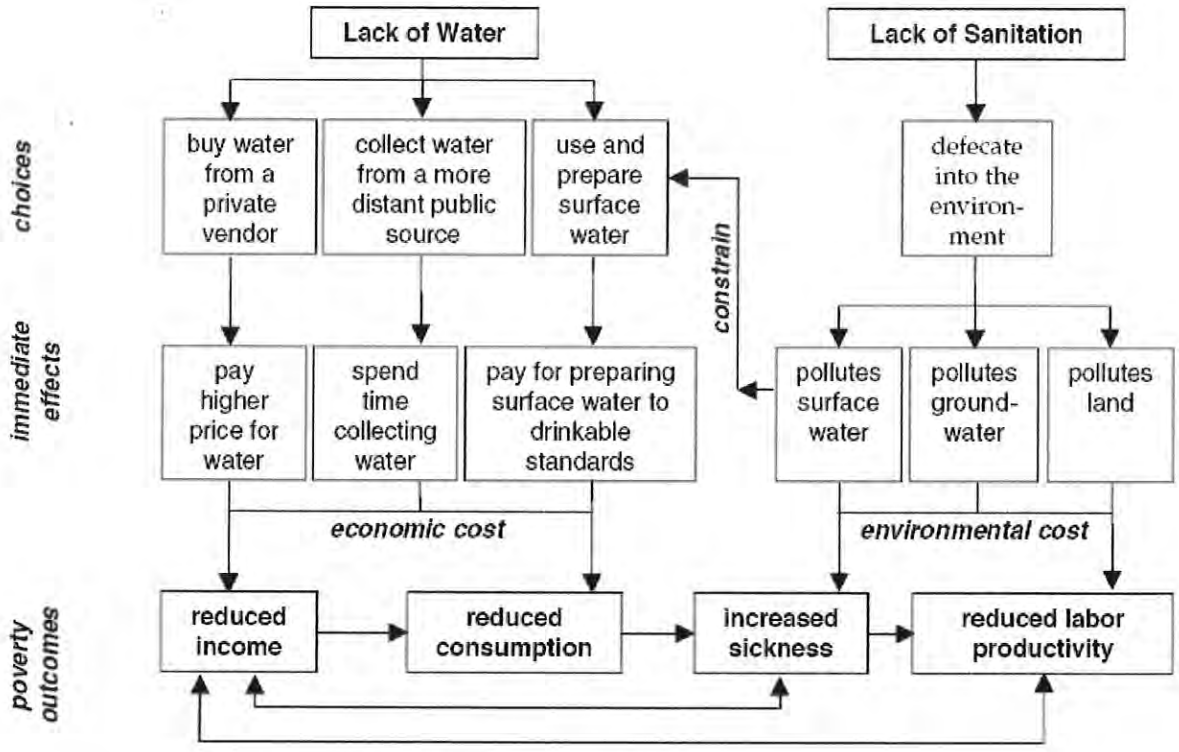

Figure: 1.1: Consumption and Income Effects of WATSAN (**Source:** World Bank: 2002)

While this applies to the poor in general, the impacts are severe on women--as they are primarily responsible for managing water and sanitation and their lives are closely connected to it.

Poor women often face more exclusion due to prevailing inequalities. Women's equal right to own, manage, control and use land and property and non-discrimination in access to basic services such as housing, water, sanitation, health and education facilities is an important aspect that should be acknowledged at all times. However, in most cases this right is not enjoyed due to a number of reasons which include: culture, patriarchy, religion, lack of resources by women, suppressive laws and also lack of awareness by women of their rights (Muwanigwa: 2002).

Like all other fast growing cities of the developing world, Addis Ababa's infrastructure has not kept pace with the city's population growth. The inadequacies of the current infrastructure include water supply, shortage of latrines, insufficient solid waste disposal and poor drainage systems[1].

Addis Ababa today is suffering from a significant shortage of potable water. The city's water production capacity has never kept up with demand. For instance in the year 2000, while the projected demand for potable water was 293,000 m^3 per day, the city was able to supply only 173,000 m^3. By the year 2003, the city's supply of treated water stood at about 188,000 m^3 per day (UN-Habitat: 2007).

Sanitation, too, has been identified as a major challenge in Addis Ababa. The city has some of the lowest levels of sanitation in the world cities[2]. Unlike water, the sanitation doesn't have either policy or clear institution to rest upon. The existing sanitation system in Addis Ababa comprises of limited conventional sewage and on site systems of excreta disposal, piped and opens ditches for storm water drainage and, some dump truck for waste disposal (WHO/UNICEF/WSSCC: 2000).

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[1] UNDP, World Bank, WSP, Regional WATSAN Group for East and Southern Africa - http://www wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/Rendered/PDF/30367.pdf

[2] Ibid.

Though the problem is city wide, it is severe in the slums and informal settlements. In these congested areas where the majority of the poor live, the sanitation situation is more alarming.

In this situation again women are more affected than men. Then to consider the links among gender, poverty and WATSAN as a basis for a deeper understanding of poor women's lives and experiences in the slums and informal settlements of Addis Ababa is important. This study, therefore, shows the relationship between gender, poverty and WATSAN provision and suggests possible approaches to address the urban poor women's problems in a sustainable manner.

1.2 Statement of the Problem

Safe drinking water and adequate sanitation are essential for human survival, health and dignity and critical for coping with everyday life. Access to adequate WATSAN facilities helps people to live healthier lives, free from the risks of WATSAN related illnesses, and affords them the dignity that is due to every human being.

Unfortunately, according to widely quoted sources, 1.2 billion people are without adequate water supplies and 2.4 billion people without access to improved sanitation worldwide at the turn of the century (WSSCC & WHO: 2000). They are mainly the poor, concentrated in rural areas and slums around big cities of the developing world. As urbanization continues to increase at very fast rates in these cities due to natural population growth and rural to urban migration, the problems they face become more apparent and serious and the gap between demand and supply is continuously widening.

Addis Ababa, like most cities in developing world, is experiencing rapid expansion in terms of space, population growth and economic development, which in turn creates high demand for reliable and adequate water supply and sanitation services. The existing water sources and sanitation systems are either old or inadequate to meet the ever-increasing demand (UN-Habitat & GWA: 2005).

Different reports and researches have different information on the present water supply and sanitation coverage of Addis Ababa-- as low as to 21% (UN-Habitat: 2006/7) for water and 58% to sanitation (WHO: 2000). However, according to the reports of UN-Habitat & GWA (2005), supply coverage of the city is estimated to be 97 %, while demand satisfaction is 70 %. The report, though, doesn't mention the extent of coverage of those residents living in the un-serviced or under-serviced areas.

Whatever the number, the impact of the shortfall in the provision of WATSAN services is borne mainly by poor living in slums and informal settlements. As water is so hard to find, or is so expensive to buy in slum and informal settlements of the city, the need to collect water becomes a drain on both their time and money. Residents who have no private connection have to walk a long way and/or spend up hours queuing to buy jerry cans of water from vendors at vastly inflated prices. Lack of access to adequate and clean water could also affect negatively the livelihood of those who use water as an important source of income.

Like inadequate water supply, lack of proper sanitation is one of the greatest problems in dense, overcrowded slums and informal settlements of Addis Ababa, with no policy at national level and no definite home for sanitation. Moreover, due to several reasons associated with urban poverty, many have to defecate in the open or share whatever limited sanitation facilities are available which tend to offer no privacy, safety or hygiene. In these conditions it is virtually impossible to remain healthy and clean. In fact, 50% of all preventable illnesses in Addis Ababa are water, sanitation and hygiene related (UN-Habitat & GWA: 2005). Diseases spread rapidly among the crowded conditions and the little money that slum or informal settlement dwellers earn often has to be spent on medicines to help the sick recover.

Women are more affected by these poor water and sanitation provision than men because of their gender role. Gender issues in terms of access to and control over water and sanitation facilities are, therefore, critical to the ability of these systems to meet the needs of poor women of Addis.

Therefore, if the water and sanitation service is to make a real difference to the lives of poor women in Addis Ababa, the service should be pro-poor women. Analyzing the status of the provisions of WATSAN in slums and informal settlements and its relation with poverty and gender needs to be considered at the forefront. Such considerations, however, are not adequately dealt with in Addis Ababa. This is the gap that this research tries to fill.

1.3 Objectives of the Study

Considering the fact that WATSAN is the domain of women at a household level, the main objective of this research is to investigate the critical WATSAN problems faced by the urban poor women in Addis Ababa and analyze the effects of these on women. Given this objective, the specific objectives are:

a) to examine the status (level, adequacy, forms of provision) of WATSAN services in poor areas of Addis Ababa;
b) to identify the major causes for inadequate WATSAN provision for poor women in these areas;
c) to examine the effects of WATSAN provision on poor women;
d) to identify the coping mechanisms adopted by poor women to cope with WATSAN problems; and
e) to suggest possible strategies and approaches that could address the critical WATSAN problems faced by poor women.

1.4 Research Questions

This study recognizes that adequate water and sanitation are so obviously essential and fundamental to everyone's health, survival, growth and development. When we don't ensure that people have access to these services, it is the poor in general who suffer - both health-wise and economically. Among the poor, women are affected by the absence of

WATSAN. The main research question to be dealt with in the present study is, therefore, to what extent do urban WATSAN problems affect the well being of poor women?

Moreover, the present study attempted to investigate and seek answers to the following six related questions: -

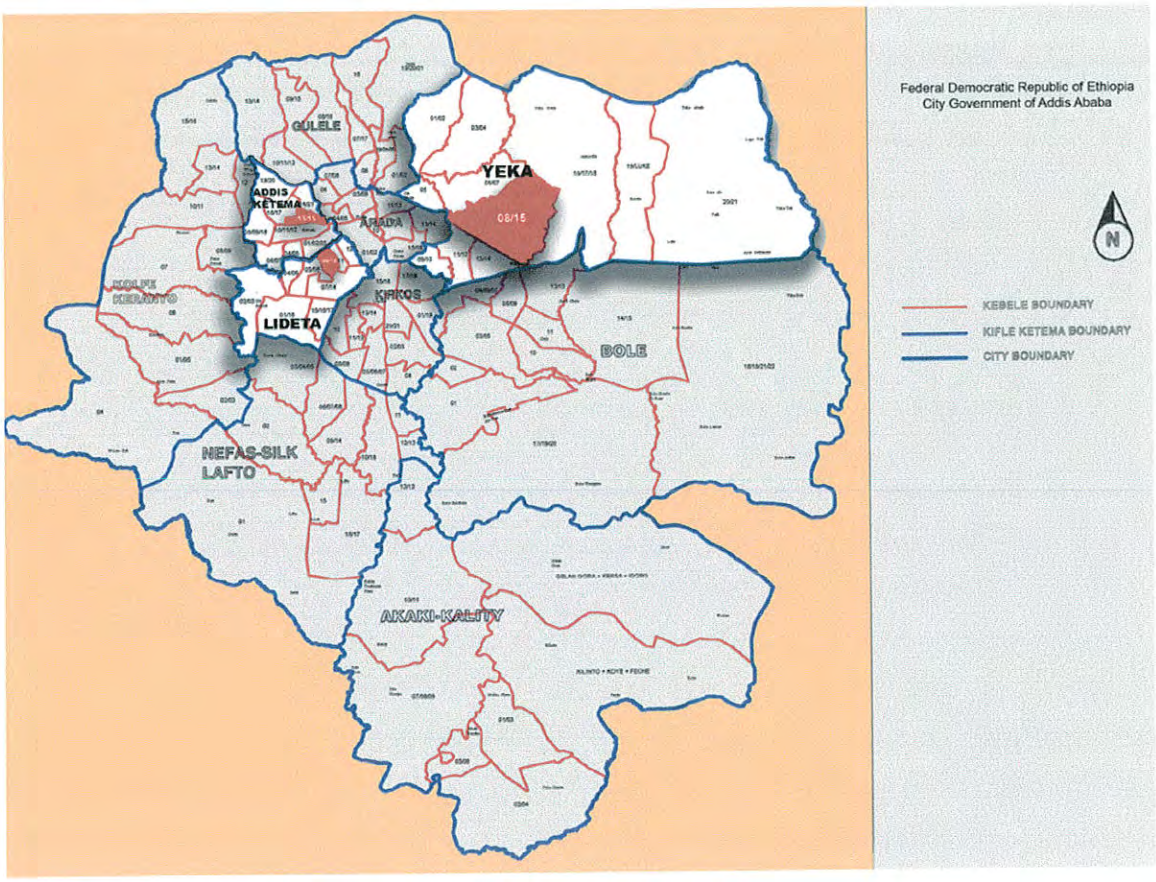
1. How well does the current delivery of WATSAN meet the needs of women in poor areas of Addis Ababa?
2. What is the interconnection between gender, urban poverty and WATSAN problems?
3. What are the major causes of inadequate WATSAN provision in Addis Ababa?
4. What are the effects of WATSAN insecurity on poor urban women?
5. What are the coping mechanisms developed by poor women to address problem?
6. What need to be done to reduce their vulnerability in WATSAN provision?

1.5 Methodology

The study uses a case study approach as the method enables the researcher to see the problem at the grass root level. Both qualitative and quantitative methods of analysis were employed to identify and thoroughly understand the effects of lack of WATSAN services on poor women.

The city of Addis Ababa is selected for the fact that though the city has a higher supply of basic infrastructure services compared to the national standards, and yet it has inadequate provision of water and sanitation. Administratively Addis Ababa is structured into ten sub-cities. From the ten sub-cities, three were selected based on their location, population density, accessibility of WATSAN services, ownership of the infrastructure, supply volumes and legality of the settlement. In the selection process relevant data was obtained from the socio-economic vulnerability assessment survey report of the Addis Ababa Civil and Social Affairs Bureau (AACSAB: 2006). Hence, Addis Ketema and Lideta were chosen from the old poor residential areas and Yeka from the periphery, as they are characterized by lack of adequate physical planning, low socio-economic status, poverty

stricken population, overcrowding, inadequacy of water supply, lack of privacy, poor access by vehicles and pedestrians, poor sanitary and environmental health conditions.



Map 1.1: Map of Addis Ababa[3] **Source:** Addis Ababa City Government

Within the selected sub-cities there is a great variation in the degree of the problem. Some neighbourhoods are extremely affected by the problem, while others are better off. At this second stage of case study area selection, three Kebeles (one from each sub-city) were chosen, again, by taking their socio-economic status into consideration. The above criteria indicators identified Kebele 13/15 from Addis Ketema, Kebele 09/10 from Lideta and

[3] The red shaded are the selected sub-cities

Kebele 08/15 from Yeka sub-city as priority areas. The two are from central areas while the third is from the periphery.

Sampling Techniques

Usually, the population of a study area might be too large for a researcher to attempt to survey all of its members. A small, but carefully chosen sample can be used to represent the study community. To a greater extent the sample is expected to reflect the characteristics of the population from which it is drawn.

The size of the sample from each Kebele is determined after dividing the Kebeles into their former four 'Ketenas' since taking the whole Kebele is very wide to use it as a sample frame. This lead to select neighbourhoods (commonly known as Temenja Yaj from Addis Ketema, Tureta Sefer from Lideta and Addisu Bono, which is named after the public tap from Yeka) by the severity of WATSAN problem based on the information freom the civil and social affairs desks of each Kebeles.

The size of the sample selected from each neighbourhood is forty households. The actual selection of the forty households was done on the basis of systematic random sampling. The list of households in the neighbourhoods was used as a sampling frame for the study. The list was obtained from Kebeles.

Data collection Techniques

The data were collected from primary as well as secondary sources.

Primary sources and instruments

Primary data were collected from sample households in the three neighbourhoods, members of the neighbourhood, key informants from government agencies and city structures.

Four kinds of data collection instruments were used to know about the situation of poor women in general, and the effects of lack of adequate WATSAN services in particular. Namely:

- Questionnaire (open- ended and close ended)
- Focus group discussion with poor women; and
- Key informant interviews
- Observation

Questionnaire

A questionnaire (which has both structured and non- structured questions) was designed to collect qualitative and quantitative primary data from the three neighbourhoods administered on poor women. The questionnaire is aimed at getting information on the effect of inadequate water supply and sanitation on poor women lives and addresses demographic, socio-economic and physical parameters. Six data collectors were used (Of these three were women).

Focus group discussions

A total of six focus group discussions (two from each neighbourhood) were employed to enrich the data gathered through the other three data collection instruments. The discussion has been held with a total of 35 women, in sets of 5-7 women participating in each focus group discussion, (both from questionnaire and non-questionnaire respondents) to get their perception and their main concerns on matters of WATSAN. The women have been picked based on the information provided by the representatives of Kebele development and women committees for their capability to clearly state and describe the WATSAN problem in their respective areas.

Key Informant Interviews

Key informant interviews were also conducted to get information from proper key informants including among others AAWSA, Environment Protection Authority of the

city, Sub-city and Kebele officials (two from each sub-cities and Kebeles) and two poor women from each neighbourhood (target population).

Secondary sources

Secondary sources were used to meet data needs of the study. Different research papers, magazines, journals, articles websites were reviewed to better understand the global and national perspectives as well as to thoroughly understand the WATSAN issues affecting poor women in the Addis Ababa context generally and inner-city slums and informal settlements in particular.

Data Analysis

The data in the study required a kind of mixed data analysis approach. For the descriptive part of the study, the materials and evidences collected from various documentary sources such as official records, statistical data, previously conducted studies and other publications were used to describe and give background information about the city, the case study areas and the WATSAN problem with its effect on women. After that, all the responses obtained from key informant interviews, the focus group discussions and from the open-ended questions included in the questionnaire were analyzed qualitatively. To help showing the clear picture of the effects some of their verbatim are quoted directly. In regards to the quantitative data analysis, the generated data were expressed in terms of graphs and tables via frequency, percentage and other descriptive statistics by using SPSS computer programme. The results have also been used, as the case required, in the qualitative analysis.

For comprehensiveness, data from the different data collection techniques were triangulated to validate and complement the findings from each of the sources. The findings were presented using a thematic approach whereby responses from different respondents are integrated under the same theme.

1.6 Significance of the Study

Increasing access to WATSAN is a key component of development and poverty reduction, as it has major benefits as well as associated social, economic and environmental benefits. The lack reinforces the rotation of poverty and hopelessness that keeps people trapped, as well as slowing the ability of societies to develop. Thus, all efforts to eradicate urban poverty shall consider the effects of water and sanitation on the lives of the poor.

Women being the majority among the poorest of the poor in the city on one hand, and as the main social groups affected by water and sanitation problems on the other, Hence, this study, by detailing these effects, can contribute towards the effort to find ways to reduce water and sanitation problems of Addis Ababa by serving as stunt point for studies of similar nature.

The findings in this study can also serve policy makers and city administration authorities as a reference to consider the needs and demands of poor urban women during WATSAN projects planning and implementation.

1.7 Limitations of the study

The study has some limitations although they are not serious enough to affect its validity in anyway.

Time constraint was one of the limitations. Examination of all possible effects of inadequate WATSAN provision on urban poor women within the given time frame and resource is practically unattainable. Access to relevant data in Addis is not an easy task. One of the problems with the data was that the statistical data available regarding the WATSAN situation of the city depends on the type of the source. The information provided by the government differs much from other international organizations'. Moreover, the available information is not in gender disaggregated manner in all the relevant organizations. Another limitation this study encountered was that some

respondents were found to be sensitive and suspicious particularly concerning certain questions having to do with their income, privacy and dignity.

1.8 Delimitation of the Study

The study is limited to assessing the effects of inadequate water and sanitation service on poor women particularly in the context of Addis Ababa. This study views the service provision mainly from the point of view of poor women. The service providers' view is included to a limited extent.

1.9 Structure of the Study

This paper, which aims to shade light on the effects of lack of adequate WATSAN on poor women in Addis Ababa, has six chapters.

The first chapter introduces the theme, the rationale, the objective, the research question and methodology used as well as the limitations encountered.

Chapter two has two parts. The conceptual background concentrates on gender, urban poverty, WATSAN and their relation while the empirical literature part deals with the studies made on developing countries and Ethiopian urban WATSAN sector. This section scans the national policy frame works related directly and indirectly to those studies as well as the status and constraints of the WATSAN provision in Ethiopia in general and Addis Ababa in particular.

Chapter three describes the background characteristics of the three sub-cities of Addis Ababa and the three Kebeles under them that have been considered for the study. Furthermore, it gives attention to the three neighbourhoods selected from each Kebele, their sample population, physical conditions as well as demographic and socio-economic characteristics.

Chapter four analyses the findings and has three sections. The first and second sections discuss the condition of WATSAN from different perspectives that help to label the

provision whether it is adequate or not. The third section of this chapter deals with possible causes for inadequacy of WATSAN provision in Addis Ababa. Here, the causes are discussed from both the urban poor women's and the service providers' point of view. The section also explains the division of labour in WATSAN, their level of involvement as well as needs and demands for better provision.

Chapter five presents, in details, the effects of insufficient WATSAN on poor women. In this chapter the health, income, education, social relations, satisfying basic needs, safety, security, dignity and privacy effects as well as the time management and water use behavior of poor women in general and its impact on highly vulnerable women in particular has been discussed. Some of their word for word quotations are outlined as well. The coping strategies of the poor women to reduce those effects of inadequate WATSAN are also discussed before the end of the chapter.

Chapter six contains summary, conclusion and recommendations. Of these, the first part deals with summary of the findings which presents the outcomes of the study by going over the main points. The second part, based on the findings will show the possible conclusions that could be drawn from the findings and also presents the recommendations given by the researcher to help the poor women of Addis Ababa lead a better life through an improved WATSAN provision.

CHAPTER 2: Review of Related Literature

2.1 Conceptual Background: Gender, Urban Poverty, WATSAN and their Relation

2.1.1 The Gender Dimension of Urban Poverty

2.1.1.1 The Concept of Gender Dimension

Though much similar in content, there are several definitions that explain the term 'gender'. To mention a few, a document prepared by SIDA defined gender as "a term that refers to the economic, social, political and cultural attributes and opportunities associated with being male and female. In most societies, men and women differ in the activities they undertake, in access and control of resources as well as their participation in decision-making." (Andersson: 1996 pp.59).

Based on this notion, the gender dimension looks at the impact of gender on people's opportunities, social roles and interactions by recognizing the social and cultural differences and inequalities between the sexes.

2.1.1.2 The Concept of Urban Poverty

As it is multi- dimensional phenomenon, there is no consensus on definitions of either poverty in general or urban poverty in particular. However, researches signify that it extends beyond low levels of income. The World Bank (2002) identified five dimensions of urban poverty: income/ consumption, health, education, security, and empowerment which determine the livelihoods of the poor.

But urban poverty is not just a collection of characteristics; it is also a dynamic condition of vulnerability or susceptibility to risks (World Bank: 2002). Same study describes the urban poor as the ones who live in with many deprivations. Their daily challenges may include: limited access to employment opportunities and income, inadequate and insecure

housing and services, violent and unhealthy environments, little or no social protection mechanisms, and limited access to adequate health and education opportunities.

Wage labour or the labour market is the main determinant of urban poverty (Satterthwaite: 2003). Most of the urban poor earn income from the informal sector. While their earnings do not have as large a seasonal component as those of the rural poor, their incomes are probably almost as unstable because they have little protection from sickness and injury and the unpredictable demand for their services. The poor possess little human capital and almost no physical capital that can be sold or consumed at the time of a sudden fall in their earnings. The poor, having no asset that can be used as collateral, also lack access to credit markets (Edwin & Pernia: 1994).

Wratten (1995) adds, commodisation of urban economy and the negative effects of government actions and policies to the list of urban poverty dimensions. In addition absence of mechanisms to involve the poor in the decision making process could also be cited as another dimension of urban poverty.

The environment and health risks faced by the urban poor result from overcrowded housing, traffic congestion, pollution and the mismatch between urban growth and the provision of clean water supply, sanitation, solid waste disposal etc. The poor quality of the urban environment poses health threats including typhoid, diarrhea, cholera, intestinal worms.

Likewise, Sweetman (ed.) (1996) mentioned that urban people in poverty are usually those without secure employment, savings or saleable assets. They are vulnerable to changes in demand in the labour market, and in prices of basic goods and services, and they cannot afford adequate housing.

2.1.1.3 The Gender Dimension of Urban Poverty

Gender issues have been increasingly discussed in the mainstream literature on urban poverty. With particular reference to the developing world, the concern has always been that of the very intensive rate of negative effects the former is having on the latter.

As indicated by a UN article (2004), the interest in analyzing the phenomenon of poverty in general from a gender perspective is rooted in the international women's movement and it is based on the need to recognize that poverty affects men and women in a different way. It is possible to identify the gender factors that increase or decrease the probability of individuals experiencing poverty, and how the characteristics of poverty are different for men and women.

Moser (1995), too, stressed that, a gender perspective contributes to the design of policies allowing measures to be directed at the severest poverty and the most vulnerable populations.

At the same time feminist researchers argue that consideration of urban poverty often neglects differentials between men and women in terms of their access to income, resources and services. As indicated by Jo Beall (1996) women predominate the urban poor because the jobs women obtain are poorly paid, part time or insecure. In addition women do not always control their own income because of inequities in resource distribution and decision making power within the household and inequities in society in commanding resources or assets compared to men. The vulnerability of women is compounded by inadequate access to economic resources as well as their poor representation in decision-making- key factors, which negatively influence their participation in urban service provision.

Unfortunately things are not improving. According to UN-Habitat report (2003) all of the standard indicators - poverty rates, health care, education, participation in the labour force, and participation in the political process - reveal the extent to which urban women are worse off now than they were a decade ago.

2.1.2 The Poverty Dimension of Urban WATSAN

The urban WATSAN and poverty are closely linked. The lack of clean water, refuse collection, adequate sanitation and drainage have devastating impacts on human being.

They eat up time as people care for the sick, queue for water or look for toilets. They cost money in medical bills and high charges. They rob people of dignity and emphasize their lack of power. A poor environment is a cause of poverty, and in turn poverty contributes to the poor environment.

This truth is repeatedly told in several researches and reports. To mention but a few, UNDP in its 2006 report, emphasized that access to clean water and adequate sanitation are closely intertwined with poverty. According to the report, the roots of the water crisis that the world currently faces can be traced to poverty, inequality, and unequal power relationships. Clean drinking water indeed has a direct impact on poverty. Improved drinking water could directly translate to better health and timesaving for poor families.

UNIFEM (2003) too, in one of its report indicated that, access to a range of basic infrastructure services (e.g. clean water, sanitation) is often regarded as an indicator of well-being Infrastructure services can reduce poverty through health improvements, for example, by improving WATSAN, it is possible to decrease incidence of illness, and associated lack of productivity.

Moreover; World Bank (2002) describes how the impact of inadequate WATSAN services falls primarily on the poor. Badly served by the formal sector, the poor make their own, often inadequate, arrangements to meet basic survival needs. Many fetch water from long distances or end up paying high prices to water vendors for very small quantities of water.

The clear need for basic WATSAN services for the poor assume even greater significance when the linkages with other dimensions of poverty are considered. Water- and sanitation-related sicknesses put severe burdens on health services and keep children out of school. Human waste poses a tremendous social cost through pollution of rivers and groundwater. Table 2.1 shows how lack of WATSAN affects poverty.

Table 2.1: Linkages between Poverty and WATSAN

	Poverty dimensions	Key effects
Lack of WATSAN and Hygiene	Health	• Water-and sanitation-related illnesses • Stunting from diarrhea-caused malnutrition • Reduced life expectancy
	Education	• Reduced school attendance by children (especially girls) resulting from ill health, lack of available sanitation, or water collection duties
	Gender and social inclusion	• Burdens borne disproportionately by women, limiting their entry into the cash economy
	Income / consumption	• High proportion of budget used on water • Reduced income-earning potential because of poor health, time spent collecting water, or lack of opportunity for businesses requiring water inputs • High consumption risk because of seasonal or other factors

Source: World Bank: 2002

2.1.3 The Gender Dimension of Urban WATSAN

2.1.3.1 Urban Water Supply and its Gender Dimensions

There are several gender issues related to water supply and sanitation in urban areas- all of which emanate from women's being responsible for water in the house; for health of family, especially of children; for hygiene at home; for the sick and for the elderly and because women menstruate, get pregnant and give birth.

2.1.3.1.1 Urban Water Supply

Sufficient, safe, physically accessible, and affordable water is necessary to achieve a minimally acceptable quality of life. The World Health Organization has established a norm of 50 liters per capita per day (lpcd) for water use to satisfy basic personal and hygiene requirements. Of that amount, about 10 lpcd serve drinking and cooking needs, while the remainder goes to bathing, particularly hand washing. When water is expensive, either in cash terms or in the time and energy needed to collect it, the poor often cut total consumption to 15 lpcd or less and cut back on bathing.

A number of studies have shown that the volume of water collected varies little for water sources from about 30 to 1,000 meters from the house. For sources closer than 30 meters, usage increases, and for more than 1,000 meters, usage falls.

Like distance queuing time also matters. If users can walk 10 meters to a stand post but then must wait an hour before use, they will collect no more water than someone traveling 200 meters to a stand post that has no wait in line.

The WHO requirements of meeting the right to water vary according to local conditions. However, the general conditions will need to be met in all situations.

Table 2.2: Characteristics of Adequate Water Supply

Availability:	The water supply must be sufficient and continuous so as to meet personal and domestic needs--e.g. drinking, personal hygiene, clothes washing, and food preparation.
Quality:	Water provided must be free from micro-organisms and chemical and radiological contaminants that might threaten a person's health. Water should be of acceptable colour, odour, and taste.
Physical Accessibility:	Water must be within safe physical reach for all members of a community. Sufficient water must be accessible from each household, workplace, and educational institution. Water facilities must be sensitive to gender and privacy requirements.
Affordability:	Water and water facilities must be affordable for all.
Equal Access:	Water and water facilities must be accessible to all, particularly vulnerable or marginalized populations.

Source: WHO/UNICEF/WSSCC: 2000

Though accessibility of water is relatively better in urban areas than rural ones, there is still huge problem for urban poor to have water in its full meaning--Sufficient, safe, physically accessible, affordable, quality and equally accessible (WSSCC:2004).

A household is considered to have access to improved water supply if it has sufficient amount of water for family use, at an affordable price, available to household members without being subject to extreme effort, especially to women and children. Households in the slums are rarely connected to water networks in many cities within the developing countries and can only rely on water from vendors at exorbitant costs, sometimes at 200 times the actual costs (UN-Habitat: 2003).

2.1.3.1.2 Key Gender Issues in Urban Water Supply

Satterthwaite (2003), summarized the cross cutting nature of gender in WATSAN. In urban slums without easy access to clean water, women have to either walk long distances, queue for hours at crowded stand posts, use dirty water from ponds and rivers (often polluted by factories) or are charged large amounts of money by water sellers (up to hundred times the cost charged by public utilities). Thus, collecting water consumes a significant proportion of their time.

The water containers commonly hold about 20 litres of water, which weigh 20kg also can cause women ill health. Constantly carrying such heavy weights on the head, back or hip, has severe health implications. Backache and joint pains are common, and in extreme cases curved spines and pelvic deformities can result, creating complications in child-birth. Pregnant women sometimes keep on carrying water until the day they give birth.

WSSCC (2004), stressed also how pregnant women face greater risk of hookworm infestations, which has been linked to low birth weight and inhibited child growth, even in urban settings.

Another study by WHO (2005) also highlights the fact that access to adequate supply of good quality water for pregnant women is vitally important to protect them from serious diseases such as hepatitis. The study also points, physical assault and rape are also real risks faced by women collecting water from an isolated place or taking themselves off to a secluded spot at night to relieve them selves. Thus, the study concludes, accessing some sources of water can be dangerous in itself even for urban poor women.

2.1.3.1.3 The Benefits of Safe Water for Urban Poor Women

Besides indicating the impact of inadequate safe water supply on poor urban women's lives, several researches pointed out the significance of improved water supply on urban poor women's life. Table 2.3 summarizes the benefits.

Table 2.3: The Benefits of Safe Water for Urban Poor Women

Gender and Health	Widespread health improvements benefit women directly (including maternal health), aid women as carers of the sick and result in better household hygiene.
Gender and Domestic Work	Improved water supply reduces the burden of domestic tasks and gives women more time with children and for economic activity.
Gender and Income Generation	Improved water supply and reduced burden of disease frees up more time for women to work to generate income and develop enterprises. Water also serves as a means of livelihood.
Gender and Culture	Improved WATSAN facilities enhance women's dignity, status and opportunity.
Gender and Education	More girls attend school when urban water supplies are improved.

Source: World Bank: 2002

2.1.3.2 Urban Sanitation and its Gender Dimensions

2.1.3.2.1 Urban Sanitation

Sanitation has been defined differently in different countries and by various organizations. To some it embraces the management of excreta, domestic wastewater (or sullage), solid wastes, and storm water drainage. To others, it refers only to one service--the management and disposal of excreta.

As used in the MDGs, however, "sanitation" embraces two services, namely, the management of excreta and the management of sullage or domestic wastewater (UNICEF: 2005).

Besides the difference in the meaning, lack of access to basic sanitation is strongly linked to poverty and to type of settlement (WHO/UNICEF: 2002). In most countries, those

with the least access to sanitation tend to be the poorest or rural dwellers. Other areas that tend to be without access are congested urban slum areas, squatter settlements, and run down areas. The reasons for lack of access vary from place to place. For example, in squatter settlements, the critical barrier to access to sanitation service is often linked to lack of access to land title. The report further indicates that, in 2000, 40% of people (2.4 billion) had inadequate sanitation.

World Bank (2002) also emphasized that, the provision of adequate sanitation facilities in urban areas is an important investment, which safeguards peoples' health and well-being at both individual and societal levels as well as protecting the environment. It also summarizes the effect of urban sanitation on human well-being (Table 2.4).

Table 2.4: The Effects of Urban Sanitation on Human Well-being

Health	For healthy cities adequate sanitation is essential. The opportunity for transmission of excreta-related diseases is much greater in the densely populated areas, which characterize informal settlements.
Privacy and convenience	People value the privacy and convenience of being able to use toilets either within or close to their homes.
Security	Women in particular value the sense of security brought about by using a toilet within or close to their homes.
Livelihoods	Healthy people are less likely to be away from work through common excreta-related illness such as diarrhea, thus ensuring less interruption to their means of livelihood.
Environment	People value living in a clean and healthy environment free from dirt and mess.

Source: World Bank: 2002

Good sanitation is important for urban and rural population, but where there is poor sanitation, the risks are greater in slum areas where it is more difficult to avoid contact with waste. Inadequate sanitation, through its impact on health and environment, has considerable implications for economic development.

Lack of sanitation and poor hygiene causes water-borne diseases, such as diarrhoea, cholera, typhoid and several parasitic infections. Moreover, the incidence of these diseases and others linked to poor sanitation – e.g., round worm, whip worm, guinea

worm, and schistosomiasis (bilharzias) – is highest among the poor, especially school-aged children (WUP: 2003).

2.1.3.2.2 Key Gender Issues in Urban Sanitation

The Global water supply and sanitation assessment report (WHO/UNICEF/WSSCC: 2000) expresses sanitation as 'the hidden gender problem—as it is women who suffer most in the absence of adequate sanitation.

Women are not only the primary users of sanitary facilities but also largely influence household habits and overall use of the facilities. The location of toilets, their levels of cleanliness and safety in use are important factors in access because women have been found to shun toilets due to possibility of abuse, especially at night. Where toilet access has been monetized women have even less access due to their low economic status. Cultural norms and taboos also hinder women from accessing communal toilets in the slums (UN-Habitat: 2003).

A joint report of Water Aid and Tear Fund[4] also signify how poor sanitation hits women hard. In many cultures, women who have no access to a latrine must wait until it is dark to go to the toilet or they have to walk long distances to find an isolated spot. This exposes them to the danger of sexual harassment, assault and animal attacks, never mind discomfort and sometimes illness. They experience a loss of dignity as well as being 'prisoners of daylight'. Children's ill health caused by poor sanitation also places an increased burden of care on the women and girls who look after them, adding to their already heavy workload. Men have greater freedom to go to the toilet during the daylight hours in the fields and by the roadside, or in cafes and bars. Men, too, are the usual decision-makers in controlling resources for sanitation, whether at community, national or international level.

Andersson (1995) quoting a research in East Africa indicated that apart from their own well being, safety (particularly for children) and privacy were the main concerns of women.

[4] Retrieved from http://www.wateraid.org.uk/uk/

Women wanted to be sure that their children would not fall into the holes and they wanted doors that could be closed to prevent passers-by from looking in.

According to the WSSCC, too, "lack of basic sanitation and safe water is an acute problem for the women and girls who live in poor, overcrowded urban slums and in the rural areas of the developing world. Many of them have to wait to relieve themselves until dark, sometimes confronting the fear and the reality of harassment and sexual attack," because a bathroom or latrine with basic privacy is not available (WSSCC: 2004).

Lack of sanitation has direct fallout on the health of poor women, on their dignity, on their ability to work and their ability to participate in public activities. Studies have documented how women choose to eat less and at specific times to avoid having to go to the toilet during daylight hours. In the absence of toilets, they have to use fields and this they can only do after dark or early in the morning. As a result, they are forced to control their intake of food resulting in many forms of under-nutrition and anemia (Beall, 1995). Women are also known to limit the amount of water they drink for the same reasons. In hot countries, particularly, this means many more women than men have severe urinary tract infections and kidney problems. The limited food and water also affects their energy levels. Poor women are employed in physical labour and cannot do this for long hours if they do not have either food or water. Necessity forces them to go on working, until they literally drop.

In sanitation, not only the availability of adequate sanitation, but also gender ideology plays an important role. Women in their menstruating period are generally seen as unclean. They should clean their blood themselves, and that is one of the reasons that women always have to clean everything. This, as Muylwijik (2006), is not according to reason, but according to prevailing gender ideology. During the time of being pregnant, giving birth and breast-feeding, the risks of getting infections is high. All women will try to avoid that by giving lots of attention and spending extra energy in hygiene. The direct relation with the quality and quantity of water available during that time, and the fact that women will not always be able to get it, makes them very vulnerable. This, according to her, is why maternal

mortality is directly related to hygiene, and hygiene to sanitary facilities and their cleanliness.

Menstruation, pregnancy, urinating, defecation, dirty toilets and toiletry are all taboo subjects in most cultures, not to be discussed openly, so also all the rules, written or unwritten related to it, will be hard to change (ibid).

2.1.3.2.3 The Benefits of Adequate Sanitation for Urban Poor Women

As several studies indicate (Muylwijk: 2006, WSSCC: 2004 and WHO: 2000) proper sanitation facilities are very important for social, economic, political and physical aspects of women's empowerment:

i. **Social empowerment**: In sanitation usually the lowest people and women are responsible for the work most looked down upon: cleaning of toilets, removing of sanitary waste and other solid waste, caring for sick people, etc. If these activities can be considered as most important for the health of the families and the communities instead of just dirty work, the position and social status of those who do this work will rise. If all instead of just the lowest categories of people does this work, it will also have a great empowering effect.
ii. **Economic empowerment**: Related to sanitation it is clear that the most dirty work is done by women mainly and that it is usually not paid at all. Therefore it does not improve her situation, even if it is a lot of necessary work.
iii. **Political empowerment:** Related to sanitation, the political aspects of empowerment are important for women, because it will mean that they will have a say in decision making, and not just take part in heavy and dirty work. If they will be able to influence development efforts, they will feel empowered.
iv. **Physical empowerment**: It is the right to physical dignity with regards to sanitation facilities available to women, especially. Also the right to safety and security, that is not to be harassed or even raped when in need of a toilet during the night.

2.1.4 The Poverty, Gender and WATSAN Interface in Slums and Informal Settlements

Although cities are, and will remain, the centers of global finance, industry and communications, home to a wealth of cultural diversity and political dynamism, immensely productive, creative and innovative, they are also considered as breeding grounds for poverty, violence, pollution and congestion. Hence, urbanization creates not only economic opportunities, but also intensifies the unequal distribution of income among the urban population and contributes towards environmental degradation.[5]

As urbanization continues to increase and millions of people flock to cities, the problems cities face become more apparent and serious. Issues like water supply and sanitation, and homelessness affect all cities, regardless of location and size. The problems cities face are most serious in slums, which provide living space for 32% of the world's urban population and pose unique challenges to cities (ibid).

Almost everywhere in the world, women predominate among those living in slums and informal settlements. This is mainly because in the labour market women are usually the worst paid and most insecure jobs and they generally do not command equal resources or assets at the societal level (UN-Habitat: 2003).

Men and women experience and respond to urbanization in different ways as a result of gendered constraints and opportunities. Despite the laws, policies and international conventions on the empowerment of women and protection of their rights, poor women and girls still face multi-faceted problems. The lack of basic services and infrastructure affects women most fundamentally in cities because they, more than men, deal with water, sanitation, fuel, and waste management due to their domestic responsibilities (Hutton & Haller: 2004).

Thus, the lack of convenient and affordable access to water reduces a poor household's consumption of other commodities and services, leaves it consuming less than the

[5] Five Minutes to Midnight, May 2005, Volume 3, Issue 5 -http://i2r.org/fmm/issues/may2005/article5.html

optimum amount of water for good hygiene, and impacts health and labour productivity of the household members. It may also reduce income-generating opportunities of the household; thereby further reducing income and consumption.

Access to good sanitation is equally difficult. However, slum poor cannot afford to invest in them. Among the poor, it is women who suffer more. It affects their health, dignity, ability to work, ability to participate in public activities.

2.2 Empirical Literature

2.2.1 Overview of Urban WATSAN Sector Characteristics of Ethiopia

2.2.1.1 Water Supply

Though water is a basic need in sustaining life; only a minority of Ethiopians has an access to potable water. Urban areas receive better service than rural. About 65 % of urban areas (excluding Addis Ababa) are covered with clean water, while only 15 % of rural areas receive water supplies.

Statistics about Ethiopians access to safe water supply vary greatly. If we take the 1994 National CSA survey, only 24% of the housing units in the country used a safe source of water, 14% through piped (tap) water, and 10% from protected springs. The rest, 76% of the country's population used "unsafe" water, such as from unprotected springs and wells or directly from rivers. In 1994, this concerned over 40 million people. After four years, CSA Welfare Monitoring Survey of 1998 data shows no improvement in the situation; still 77% of the population using unsafe water. It then concerned 46 million people.

Table 2.5: Use of Safe and Unsafe Water Sources, Country-wide, 1998

Type of population	Number of people (year 2000)	Using safe source		Using unsafe source	
		Piped water	Protected Spring	Unprotected Spring or well	River or pond water
Urban	9.5 million	84%	8%	4%	5%
Rural	54 million	5%	12%	44%	39%
Total	63.5 million	17%	11%	38%	34%

Source: MoWR, UNESCO & GIRDC: 2004

There were some variations in service coverage among the various regions. Figure 2.1 gives a summary, stating the percentage of housing units having access to safe water.

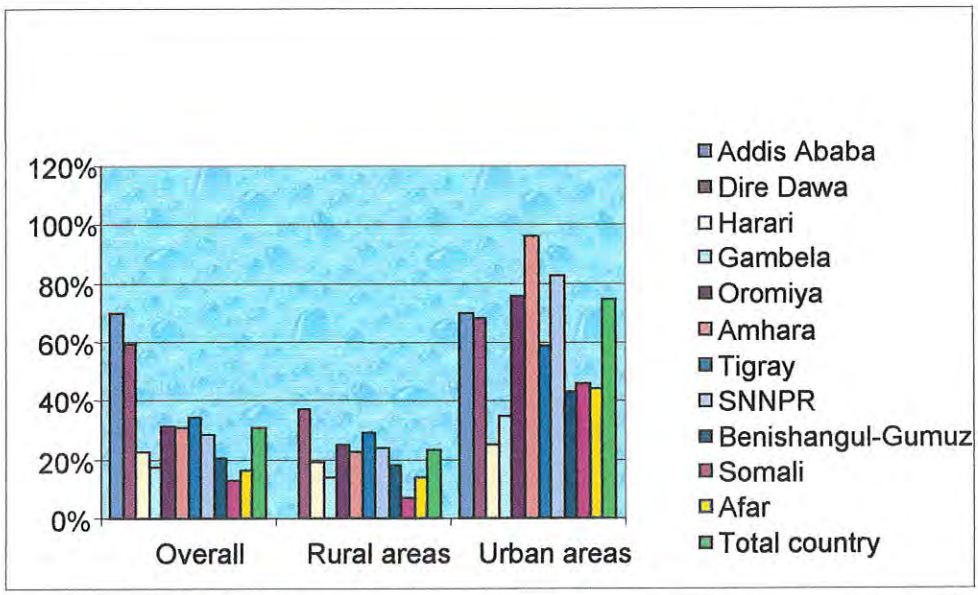


Figure 2.1: Access to safe water, by region (2001) **Source:** MoWR, UNESCO & GIRDC: 2004

The city-states of Addis Ababa, Dire Dawa and Harar score highest because of the large urban proportion of the population. The survey even claims near-full coverage in the towns. The four largest regions score close to the national average. The smaller regional states, especially Afar and Somali, score low.

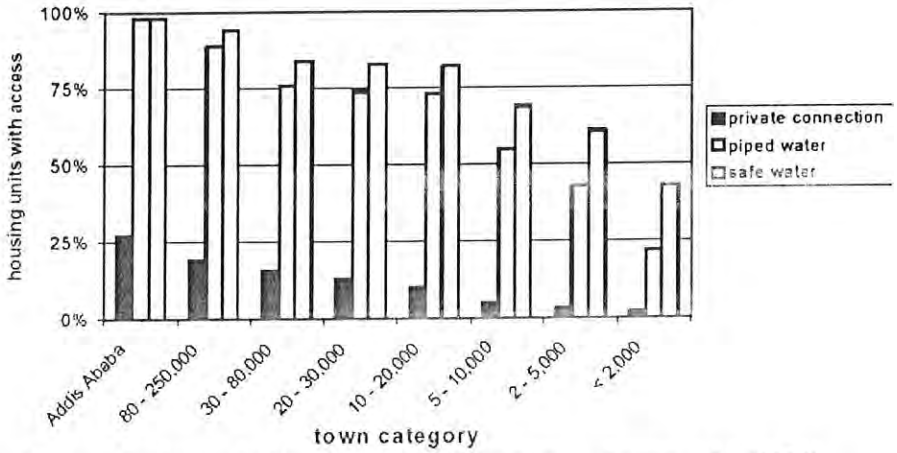


Figure 2.2 : Access to Water, Urban Population Source: CSA (1994)

Water Tariff

According to WOMR sources, for a long time, except for urban water supply, water tariffs have not been charged for rural water supply services. All urban dwellers pay water tariff for the potable water they consume. But the water tariffs are different for many urban centres and could also be different within the same town.

The Water Policy has provided guidance that tariff structures in water supply systems should be based on equitable and practical guidelines and criteria, that they should be site specific and determined according to local circumstances. The Water Policy states that rural tariff settings should be based on the objectives of recovering operation and maintenance costs, while urban tariff structures should be based on the basis of full cost recovery (Article 2.3.1.2). It directs also that tariff in urban water supplies needs to be progressive and tied to consumption rates, while flat rate tariffs to be applied for communal services[6].

2.2.1.2 Sanitation

The National Water Development Report for Ethiopia (2004) describes the sanitation situation in Ethiopia as very appalling; with very limited development and in-need of efforts and attention. According to the World Development Report of 1996, too, it is the

[6] See the details of water tariff of Addis Ababa in Table 2.11

poorest compared to other East African countries[7] ith only 10% of the population had access to proper sanitation, compared to 30%, 60% and 77% in Kenya, Uganda and Tanzania, respectively. The report indicated that most of the population in rural and urban areas does not have access to safe and reliable sanitation facilities. Majority of households do not have sufficient understanding of hygienic practices regarding food, water and personal hygiene. As a result above 75 % of the health problems in Ethiopia are due to communicable diseases attributed to unsafe and inadequate water supply, and unhygienic waste management, particularly human excreta. The National Water Development Report for Ethiopia (2004), too, stated that the major health problems of Ethiopia are communicable diseases related to WATSAN. This is especially true in urban areas where overcrowding is very high.

Table 2.6: Sanitation: Use of Latrine in Ethiopia

Residence	1994	1995	1997	1998
Rural	1%	1%	5.7%	7%
Urban	60%	60%	55%	71%
National	8%	10%	12.5%	26%

Source: MoWR, UNESCO & GIRDC: 2004

Table 2.7: Access to Sanitation Facilities, by Region (1994)

Regional State	Overall	Rural areas	Urban areas
Addis Ababa	74%	5%	75%
Dire Dawa	55%	3%	75%
Harari	42%	1%	69%
Benishangul-Gumuz	19%	15%	63%
Gambela	15%	11%	31%
SNNPR	13%	9%	63%
Oromiya	13%	7%	59%
Somali	11%	4%	48%
Afar	8%	4%	37%
Tigray	7%	3%	29%
Amhara	6%	3%	37%
Total country	13%	6%	57%

Source: MoWR, UNESCO & GIRDC: 2004

[7] Retrieved from: http://www.worldbank.org/wdr/2000/fullreport.html

As Table 2.7 indicates, access to sanitation facilities by region, the city-states of Addis Ababa, Dire Dawa and Harar score relatively high again, with 2/3 to ¾ of the town populations using a sanitary toilet.

Review of more detailed data (Fig. 2.3) reveals that the use of flush toilets was only reserved to 12%, 7% and 8% of the dwellers of the three respective towns. The coverage is considerably better in towns than in rural areas. The figure illustrates access to various types of facilities by town-size. The general picture is that people living in larger towns are better off.

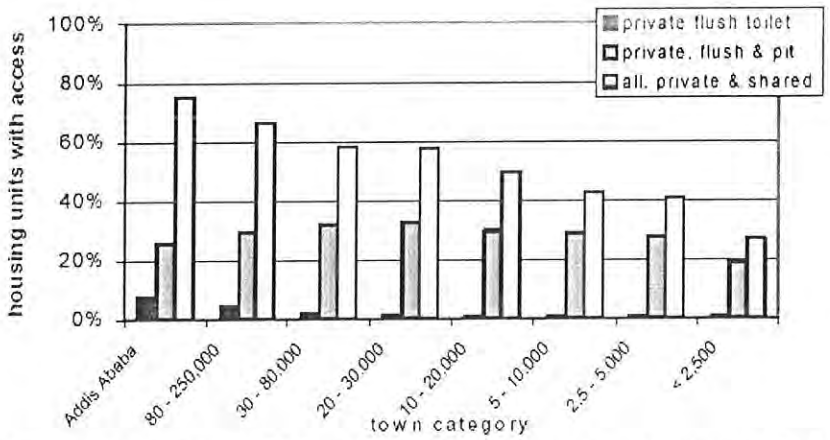


Figure 2.3: Access to Toilet, Urban Population **Source :** CSA (1994)

Not only is the access, the quality of latrines are generally poor. As per the National Water Supply and Sanitation Master Plan Report (ESPC-3: 2002), over 50% are structurally unsafe and 50% hygienically inappropriate. The report underlines that, public sanitation services such as public toilet facilities, sludge collection and related environmental health services, too, are generally inadequate and do not meet demands. Addis Ababa is the only town with a small sewerage system with only 15,000 people, or 0.6% of the population connected. Figure 2.4 shows the access to sanitary facilities in towns by region. It shows a relative low coverage in Tigray, Gambela and Amhara.

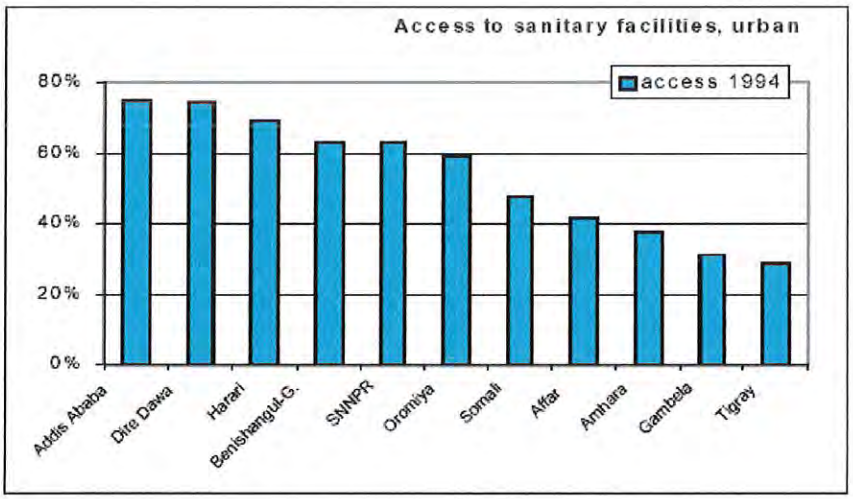


Figure 2.4: Access to Toilet Facilities, Urban, by Region **Source:** MoWR, UNESCO & GIRDC: 2004

The use of flush toilets in other towns than Addis Ababa was very low: 3% only. In fact, in 1994 half of the country's flush toilets were in Addis.

Table 2.8: Urban Coverage with Toilet facilities

Types of facilities	Year 1984		Year 1994		*Year 1998*	
	Addis Ababa	Other Urban areas	Addis Ababa	Other Urban areas	Addis Ababa	Other Urban areas
Pour-flush	12%	3%	12%	3%	11%	5%
Pit latrine- private		12%		26%		
Pit latrine- shared	57%	37%	63%	21%	73%	37%
No facility	31%	48%	24%	49%	15%	58%

Source: MoWR, UNESCO & GIRDC: 2004

Table 2.8 shows the situation between 1984 and 1994 stayed the same, except for the shift from shared to private pit latrines. However, the 1998 survey showed deterioration.

Table 2.9: Urban Access to Bathing Facilities

Size Group	None	Bath	Shower		Other	
			Private	Shared	Private	Shared
Addis Ababa	90.4%	3.9%	0.3%	3.9%	0.7%	0.7%
80 - 250,000	91.4%	1.1%	0.3%	3.7%	1.5%	1.4%
30 - 80,000	96.8%	0.5%	0.2%	1.0%	0.3%	0.8%
20 - 30,000	95.2%	0.1%	0.2%	1.4%	1.5%	0.9%
10 - 20,000	95.6%	0.3%	0.1%	0.8%	0.6%	1.8%
5 - 10,000	97.8%	0.9%	0.0%	0.2%	0.1%	0.5%
2.5 - 5,000	92.7%	0.5%	0.0%	1.5%	3.6%	1.3%
1.0 - 2,500	98.6%	0.2%	0.0%	0.3%	0.4%	0.1%
< 1,000	94.2%	0.0%	0.3%	0.3%	0.3%	3.2%
Average	93.6%	1.5%	0.2%	2.2%	0.8%	1.3%

Sources: MoWR, UNESCO & GIRDC: 2004

Regarding sewer and septic tank, a UN-Habitat study (2003) shows that, more than 90% of Addis Ababa's population lives in homes with no connection to sewer and only 2% of the houses have septic tank.

2.2.1.3 Public-Private Partnership

One of the options for financing water supply and sanitation facilities is to develop partnerships between public and private sectors (ESPC3: 2002, MoWR: 2002):– The water policy, also, has included "the need of development of a frame work for the sustainable and effective collaboration among all stakeholders including the Public Sector, donors, communities and the Private Sector at all levels as well as creating and legalizing forum for the participation of all stakeholders" (Article 4.1.5).

Even though the private sector is involved in disposing liquid and dry waste privatization of water supply services the current policy prohibits the involvement of the private sector in water source development.

2.2.2 WATSAN & Gender in Laws and Polices of Ethiopia

The participation of women in the development of water and sanitation scheme is a determinant factor for its sustainability. The Water Resources Management Policy launched in 2000, (MOWR/ FDRE: 2000), among others gives the right of full involvement of women in the planning, implementation, decision-making and training; as well as empowers them to play a leading role in self-reliance initiatives (Article 2.2.10). But in practice, as the National Water Development Report (MoWR, UNESCO & GIRDC: 2004) acknowledges, women were not involved in the initial stages of water development in the past. They would be called upon to use the scheme without considering whether or not the project is the felt need of the beneficiaries at the later stage; and, therefore, the sustainability of the scheme is highly affected. Both the gender mainstreaming guideline (2001) and field manual (2005) prepared by the ministry stressed the need to encourage women to serve as operators of the system since they are the ones responsible for getting water, and the ones who suffer most if the systems fail. The guideline set at least 2 out of 5 members of the water committees to be women at the local level in order to run the schemes.

Similarly, the Environmental Policy which was issued an in April (EPA/FDRE: 1997) has given emphasis to human settlement, urban environment and environmental health, particularly to the establishment of wastes disposal facilities, construction of latrines and sewerage systems as well as awareness creation/raising of the public on sanitation issues. The policy has also dealt with social and gender issues, as one of the cross-sectoral environmental policies.

In the National Policy on Ethiopian Women, which was launched in September 1993 (TGE/OPM: 1993), there is no article which specifically targets urban women, although one of the contents of the policy states that: "making sure that women participate in the fields of development activity and enjoy the benefits thereof on an equal basis with men and guaranteeing them legal protection of their rights".

There are also sectoral policies, which have incorporated gender and pro-poor issues in relation to water supply and sanitation services. For example, the Health Policy, launched in September 1993 (TGE/OPM: 1993) states that "Special attention shall be given to the health needs of the family particularly women and children".

Moreover, the December 1994 Constitution of FDRE (FDRE: 1994) contains an Article, (Atricle:35) on the Rights of Women. Sub-article six of this article underlines that "Women have the right to full consultation in the formulation of national development policies, the designing and execution of projects, particularly in the case of projects affecting the interests of women". Article 44 of the same Constitution, which is on Environmental Rights, in sub-article one states that "All persons have the right to a clean and healthy environment".

As indicated above, there are many gender responsive policies launched since 1993, though most do not focus on poor women and men who are residing in slums and informal settlements. Besides, there is very limited implementation on the ground even on the comprehensive ones.

2.2.3 Key Constraints in WATSAN Provision in Ethiopia

Different researches and reports at the city level show that although efforts were made and still are being made to enhance the development of the sector, there remains a lot to be done. The past performances, viewed in terms of the socio-economic requirements of the people, are not satisfactory. Here is the summary of the major constraints mentioned in the National Water Supply and Sanitation Master Plan (ESPC3: 2002), National Water Development Report for Ethiopia (MoWR, UNESCO & GIRDC: 2004), and Report on The Rapid Gender Assessment on the Provision of the WATSAN Services in the Addis Ababa City (UN-Habitat & GWA: 2005) for easy and quick reference.

Table 2.10: Constraints in WATSAN Provision in Ethiopia

Institutional instability	• Sector institutions were marked by frequent restructuring and re-organization.
Management problems	• Inefficient organizational structure, understaffing, under equipping, lack of organizational units at the lowest possible levels like woredas and zones.
Lack of linkages and coordination	• No structural and coordinated linkage among various stakeholders. • The lines of responsibility between concerning ministries, bureaus and agencies at all levels are overlapping and unclear.
Problem of capacity	• Shortage of skilled manpower and inadequate facilities is the critical issue of all sector institutions.
Limited funds/budget	• Though the sector by its nature require high level of investment, lack of sufficient funding & effective cost recovery mechanisms has imposed limits on the quantity and quality of outputs & services of the sector.
Lack of integrated information management system	• Sector institutions generate and utilize a wide range of data. In spite of this, the sector lacks a centralized and integrated information management system as well as proper records of data and information.
Weakness in operation and maintenance of schemes	• Compared to scheme design and construction, operation and maintenance usually have low profile. They are under funded compared to construction units and lack adequate facilities.
Low community participation	• Community participation in project identification, construction, operation and maintenance of schemes is low.
Insufficient pubic private partnerships	
Low water use efficiencies in all water consuming sectors.	

Source: Own compilation

2.2.4: The Status of WATSAN in Addis Ababa

Description of the City

Ethiopia's towns and cities have been growing rapidly as a result of both migration from rural areas and the natural growth of the existing population. It is estimated that nearly one-third (27%) of Ethiopia's urban population is living in Addis Ababa (UNEP: 2006). Addis Ababa, the capital city of Ethiopia, was established in 1889 and is a city of an estimated population of no less than four million (UN-Habitat: 2007). The city's growth has accelerated dramatically since a major urban migration into the city began in the mid 70s driven mainly by unemployment, poverty and declining agricultural productivity in

rural areas, and relatively improved income and employment opportunities in the urban areas. The population doubled in the last twenty years and projected population growth points to 5.1 million in 2015 (UNDP: 2004). The city has also shown extensive physical growth over the years. This has put a strain on service provision by city administration and has also led to the expansion of unplanned/ informal settlements, commonly known as squatter settlements.

As official statistics show, the city today is experiencing one of its slowest-ever population growth rates, 2.93 per annum. Even with this admittedly low growth rate, the capital continues to attract 90,000 to 120,000 new residents every year. In general, it appears that much of this growth (probably up to 70 percent of the total) takes place in the slums and squatter settlements of the city without toilets, drainage systems or rubbish collection services and without safe water on tap (UN-Habitat: 2007). Thus, WATSAN-related diseases are common - exacerbated by the overcrowded conditions and poor hygiene.

Another study by UNDP, World Bank, WSP[8] also revealed that Addis Ababa's infrastructure has not kept pace with the city's population growth. Poor sanitation has been identified as a major challenge and the government as well as non-governmental organizations are attempting to improve the situation.

Efforts are undertaken to improve the situation of the city by the government and different organizations. One of these is the Water for African Cities Programme (WAC) that took place as the result of the resolution passed by the African Ministers Conference held in Cape Town, in 1997 and launched by the United Nations Human Settlements Programme (UN-HABITAT) since 1999, on the need to address the urban water problems in the continent. The WAC I Programme was implemented through the representation of the Addis Ababa Water and Sewerage Authority (AAWSA), the responsible organization for the provision of drinking

[8] Field Note- UNDP, World Bank, WSP, Regional WATSAN Group for East and Southern Africa - http://www wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/Rendered/PDF/30367.pdf

water and wastewater collection, treatment and disposal as well as the Addis Ababa Bureau of Education. After the evaluation on the accomplishment of the objectives of the WAC Phase I in pilot cities, Addis Ababa was again included to be among the 17 African Cities participating in the WAC II Programme, to be implemented from 2005 to 2007. It was underlined in the proposal document that the targets are the sustainability of the results gained during the phase I and also strengthening and expanding the WATSAN services to the poor residents of the city (UN-Habitat & GWA:2005).

Overview of Water Supply Sector

A little over a century has elapsed since piped water was introduced to the capital city. The Addis Ababa Water and Sewerage Authority (AAWSA), established in its present form in 1971, is the sole legal entity which is responsible for the provision of safe and adequate water, collection, treatment as well as safe disposal of sewage and ensuring the protection and conservation of water sources from pollution. The water sources are Legedadi, Gefersa, Akaki underground water, some springs and water wells. The daily production at the sources does not exceed 200,000 cubic meters[9] of treated water. Presently, distribution of water is between 40 to 46 liters per capita per day (lpcd).

Today, Addis Ababa is suffering from a significant shortage of potable water. The city's water production capacity has never kept up with demand. For instance in the year 2000, while the projected demand for potable water was 293,000 m^3 per day, the city was able to supply only 173,000 m^3. By the year 2003, the city's supply of treated water stood at about 188,000 m^3 per day (UN-Habitat: 2007). The supply coverage of the city is estimated to be 97 percent. The amount distributed, however, is less than the amount produced due to leakage problem. This suggests that well over one-third of the city's demand for potable water remains unmet.

The April 2005 Partial Report on Developing Urban Indicators of the AACG, shows that 26.8 percent of the city population have private water meter connections, while 70.9 %

[9] One (cubic meter) = 1 000 litres

have tap water with shared meters. Another report also shows that in 2005 there were about 240,000 metered connections out of which 1500 are public water taps (UN-GWA:2005).

There are staggering figures regarding the city's per capita water consumption. The same report indicates that the city's per capita water consumption has fallen from 43.87 liters per person to 34.15 liters per person during the 1998-2004 periods. The April 2005 Partial Report on Developing Urban Indicators of the AACG, on the other hand, shows that, the average daily per capita water supply of Addis Ababa is 69.96 (lpcd) while the consumption is 38.3 liters. It has been indicated by AAWSA that the difference in supply and consumption is due to the volume of the unaccounted for water due to the physical leaks and non-physical leaks such as inaccurate meters, inaccurate meter reading, illegal connections and un-metered use.

The study also specifies houses with water connection have a water consumption of 84 lpcd, and houses with yard connection consume only 36 lpcd; while those served by public taps consume only 20 lpcd.

AAWSA uses a mixed, flat and progressive system of tariffs. Regarding the volumetric charge, public fountain users are paying a flat rate and this is the lowest block rate for all consumption of water. All domestic customers are paying progressive rate, while the non-domestic customers are paying the highest tariff rate. Different tariff rates are fixed for each of the three blocks of consumption ranges and the tariff is based on partial cost recovery for operation, maintenance and investment. The following table shows the five - year tariff for water supply and sewage disposal services and which is subjected to annual execution.

Table 2.11: Water Tariff of AAWSA

Block		Phasing	1st year Tariff Birr/m3	2nd year Tariff Birr/m3	3rd year Tariff Birr/m3	4th year Tariff Birr/m3	5th year Tariff Birr/m3
		Implementation period	8 July 2002 to 7 July 2003	8 July 2003 to 7 July 2004	8 July 2004 to 7 July 2005	8 July 2005 to 7 July 2006	8 July 2006 to 7 July 2007
Public Fountains		Water	1.15 Birr	1.30 Birr	1.45 Birr	1.60 Birr	1.75 Birr
		Sewerage	-	-	-	-	-
		Total	1.15 Birr	1.30 Birr	1.45 Birr	1.60 Birr	1.75 Birr
Domestic (Monthly water consumption)	0-7 m³	Water	1.15 Birr	1.30 Birr	1.45 Birr	1.60 Birr	1.75 Birr
		Sewerage	-	-	-	-	-
		Total	1.15 Birr	1.30 Birr	1.45 Birr	1.60 Birr	1.75 Birr
	>7-20m³	Water	1.60 Birr	1.85 Birr	2.10 Birr	2.35 Birr	2.85 Birr
		Sewerage	0.35	0.40	0.45	0.50	0.55
		Total	1.95 Birr	2.25 Birr	2.55 Birr	2.85 Birr	3.15 Birr
	>20m³	Water	2.30 Birr	2.60 Birr	2.95 Birr	3.25 Birr	3.25 Birr
		Sewerage	0.35	0.40	0.45	0.50	0.55
		Total	2.65 Birr	3.00 Birr	3.40 Birr	3.75 Birr	3.80 Birr
Non Domestic Customers		Water	2.30 Birr	2.60 Birr	2.95 Birr	3.25 Birr	3.25 Birr
		Sewerage	0.35	0.40	0.45	0.50	0.55
		Total	2.65 Birr	3.00 Birr	3.40 Birr	3.75 Birr	3.80 Birr

Source: AAWSA Water Demand Management Service

Overview of the Sanitation Sector

Addis Ababa has some of the lowest levels of sanitation in the world cities. (WHO/UNICEF/ WSSCC: 2000). Unlike water, the sanitation doesn't have either policy or clear institution to rest upon. As described in UNDP report (2006), historically the sanitation sector has been divided between different government agencies such as health, water, and different offices under local governments. This has led to poor co-ordination. The sewerage goes to AAWASA, the solid waste management to SBPDA (UNDP: 2006) and the city's Bureau of Health and Environmental Protection Authority also play regulating role in issues arising from sanitation.

The insufficiency of the current infrastructure includes water supply, latrines, solid waste disposal and drainage systems. These problems are exacerbated by the use of drainage

ditches for the disposal of solid waste, sludge and sullage. Sanitation control and management are hampered by the lack of adequate infrastructure and by appropriate administrative procedures that would ensure implementation of policies.

The existing sanitation system in Addis Ababa comprises of limited conventional sewage and on site systems of excreta disposal, piped and opens ditches for storm water drainage and, some dump truck for waste disposal[10]. Domestic sanitation in the city is mainly provided through pit latrines and septic tanks (WUP: 2003).

Toilet Facility

As to the toilet facility, about 63% of the population uses pit latrines, 12% use flush latrines and no less than 25% have no facility of their own at all, while many of the existing facilities are below acceptable standards (UN- Habitat & GWA: 2005). In congested areas, where the majority of the poor live, there is no enough space to build individual latrines. Residents in these areas, therefore, use communal latrines shared by between five and ten families. In some cases the figure is much higher. The operation and maintenance of shared facilities is often difficult, particularly because the housing is occupied by tenants and this discourages investment and dilutes the household's sense of responsibility for maintenance of the facilities. Occasionally Kebeles assist users to service the latrines and collect contributions. In most cases, users attempt to organize the cleaning themselves and pay for the emptying of latrines.

As to the public toilets, there are some 68 public toilets in the city but are unevenly distributed. It was the SBPDA which earlier carried out the construction and administration tasks. Presently, the agency has commenced to out source the tasks to the Ethiopian Federation of the Disabled (EFD). Consequently, 30 of them have been already transferred to the federation. However, as to the communal toilets, women, children, the elderly and the disabled can not use them comfortably. This is mainly due to the inconveniences created by the absence of doors and/or door locks, wide opening of seats,

[10] (UNDP, World Bank, WSP, Regional Water Sanitation Group for East and Southern Africa) - retrieved from http://www- wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/Rendered/PDF/30367.pdf).

etc. Similarly, the public showers are usually used by males only, and this has been due to cultural barriers reflected on females. Therefore, for those who lack the facilities, vacant spaces, green areas and river banks are common defecation sites.

Solid Waste

In Addis Ababa, appropriate solid waste disposal sites as well as the method of collection and disposition are inadequate. The UN-GWA report shows that some 765 tons or 2297 m^3 of solid waste is generated every day in Addis Ababa, the daily collection capacity being 1,482 m^3. It was also noted that only 65 % of these have been collected and transported to the disposal site of Repi, 5 % is recycled, another 5 % composted, while the remaining is left unattended in the various corridors of the city.

However, another estimation of the SBPDA reveals that the collection of solid waste in the city has reached 76 %. Out of the total solid waste generated, 76 % is estimated to be from households, 18 % from industries and institutions while 6 % is from street sweeping. The report also pointed out that there were 77 vehicles engaged in solid waste collection from the 999 garbage containers placed throughout the city (SBPDA: 2003).

Even though it is the SBPDA that is mainly responsible for rendering garbage collection services there are also NGOs operating in some areas and usually participating in recycling of solid wastes and provision of funds. As stated earlier, there are Micro and Small Enterprises, which are currently the main actors in the collection of solid wastes from households as well as institutions in the city.

Liquid waste and sewerage

Addis Ababa is the only city in the country, which counts with a sewer network (AASIP: 2001). The SBPDA report indicates that, by 2003, the daily liquid waste generated from the city was 800.000 cubic meters and the daily collection capacity being 8,000 cubic meters. The report also noted that in Addis Ababa, only 10 % of the built up area has access to conventional sewer system. Initially, the system, the only waste water collection, treatment and disposal of waste water and sludge located at Kaliti, was

established to have a capacity for serving 200,000 residents or 38,462 houses, but has been serving 1,600 housing units only (SBPDA: 2003). Even so, the full capacity of this very small treatment plant, relative to the city population, is not being used. While cesspools and septic tanks are common in well off neighbourhoods, for the majority of the population, particularly for the low-income groups, there is no system of sewage disposal and also access to wastewater treatment facilities is limited (Mieraf & Adnew: 1998). Thus as the report pointed out, the uncollected liquid waste enters dry pits and septic tanks or simply flows to open ditches and streams. In addition, the open ditches are often used to drain solid and liquid waste, thereby stressing the system.

It was also realized that there are no tariffs set for the sanitation services rendered in the city, but residents who have house connections of water are paying 5 % of their supply costs through AAWSA's bills for sanitation services. Furthermore, emptying by vacuum trucks is paid by domestic customers and this amounts to a minimum of 69 *Birr* per service rendered[11].

As to liquid wastes, government and private sector trucks are being involved in transporting wastes to disposal sites. Despite this, the majority of the industries in the city, public and private apartment buildings, institutions, etc., discharge their wastes into streams and rivers.

In general, Life threats associated with lack of adequate water and access to sanitation are high in slums and informal settlements of Addis Ababa. In these situations, among the poor, most directly affected by inadequate WATSAN are women and children. Not only are the poor women less likely to have access, but they are also less likely to have the financial and human resources to manage the impact of this deprivation.

[11] This amount is only when the service is from AAWSA and/or municipality. Other wise, it is at least three fold in the case of private companies.

CHAPTER 3: Characteristics of the Case Study Areas and the Study Population

3.1 The Case Study Sub-cities and Kebeles

3.1.1 Addis Ketema Sub-city and Kebele 13/15

Addis Ketema, one of the ten sub-cities of Addis Ababa, is located in the old city center. Twenty-one Kebeles are administered under the sub-city. According to UN-Habitat 2007 report, there are 348,063 inhabitants in the sub-city with gross density 455.4 per hectare and it is evident from the figure that it is one of the highly dense areas of the city.

The deep-rooted problems of Addis Ketema have a long history starting from the establishment of the city. The two prominent features that play a role for the present condition of the sub-city are the inter-city bus terminal and the well-known market place "Merkato" where both the poor and the rich are economically dependent on. The area is the destination for many of the migrants, who come to Addis from the rest of the country hoping for a better life. It is a home for many of the low-income, very poor or needy from different ethnic groups.

According to the socio-economic vulnerability assessment survey of Addis Ketema sub-city (AASCAB: 2006), more than half of the residents, 55.4%, are concentrated at the age group 11 – 30 years and the majority of the residents, 62.7 % have never married while less than one third, 29%, are in union. Regarding education, 17.8% of women and 8.6 % of men are illiterate. At the same time, considerable numbers of families have reported that their children's are not attending school because they have to support the family in house work.

Their occupations and employment status shows that 33.1% of males and 32.2% of females are students. Employed persons for government, NGO's and private enterprise constitute 11.4 % for males and 6.2 % for females in the sub-city whereas unemployed constitutes 16.7% and 28.6% for males and females, respectively.

Map 3.1: Map of Addis Ketema Sub-city[12]

Concerning the tenure status, only 20.3 % of the houses are owned privately and the majority, 61.5%, is Kebele houses. In both cases the houses are not in good condition--62.8 % need major repairing.

Regarding basic services, the same study describes that almost all (94.8%) of housing units have access to safe drinking water. Nevertheless, the factors to be considered for adequate water supply are: accessibility, safety, availability, affordability and sufficiency[13]; it is questionable to portray the water supply of the sub-city as adequate to the residents.

As to the sanitation, the sub-city is labeled to be one of the worst in the city where residents are suffering from poor health because of extremely deteriorated and unsanitary environment. The data found about the sanitation status of the sub- city is fragmented, which rather focus either on toilet facilities or solid waste than sanitation with its full meaning. The available data shows that, it is only about 9 % of the housing units in the sub-city that have private toilets and about 37.7 % of the housing units have

[12] The highlighted part shows the selected Kebele
[13] See the details in Chapter 4.1.1

shared toilets and 33.7 % of the housing units uses public toilets. The rest, 45.4% have no toilets. Among the housing units who have no private toilets, the majority (52.6%) has no places to construct toilets. Availability of public toilets constitutes 31.2 %.

The area where sample population was taken, Kebele 13/ 15, is found at the entrance of Merkato and inter-city bus terminal which is commonly known as "Behind Fasil Pharmacy". All the signs of poverty in the sub-city are intensely manifested in Kebele 13/15. In the discussion with the City's Social and Civil Affairs Bureau it was revealed that most of the residents are very poor or needy who depend on the charity of NGOs years after years, for monthly ration and yearly clothing. The condition of the environmental sanitation in the area, alone, is a clear manifestation of the level of poverty and inhuman situation the people undergo in this Kebele.

According to figures from the Kebele, the inhabitants are estimated to be 60,000. The overall area of the Kebele is around 30 hectare and the gross population density is estimated to be 1, 200 inhabitants per hectare. The very specific neighbourhood where the sample population found is known as "Temenja Yaj"and has about 400 households.

More than 100 NGOs are said to be working with the poor in the sub-city, of these Christian Children's Fund (CCF) is engaged in improving WATSAN condition of some Kebeles in this sub-city including Kebele 13/15.

3.1.2 Lideta Sub-city and Kebele 09/10

Lideta sub-city is also found in the inner city. It is divided into 18 Kebeles. The UN-Habitat 2007 report shows that there are 321,697 inhabitants in the sub-city with a gross density of 262.5 inhabitants per hectare. Except the Old Air Port area that covers the wider area of the sub-city, the rest part is predominantly residential area. There is no dominant activity in the area that influences the socio-economic character of the residents. As indicated by AASCAB's study, more than half of the residents (58 %) in Lideta sub-city are concentrated at the age group 11 – 30 years. The marital status of the sub-city shows that more than half (64.1 %) have never married while 28.8 % are currently in

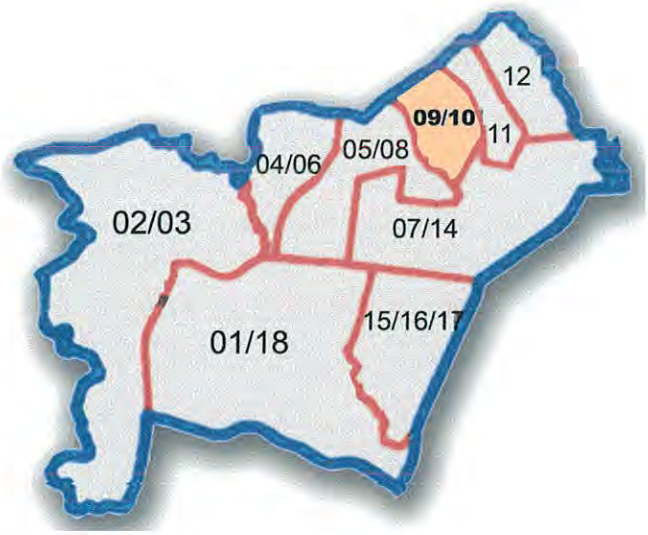
union. Divorced and widowed/widower account for only 4.1%. Concerning education, the survey result shows that 15.9 % of females and 7.5 % of males are illiterate, while 31 % of the families are currently able to send their children's to school.

With respect to occupations and employment Status, the study revealed that 32.2 % of males and 31.5 % of females are students. Unemployed constitutes 16.9 % for males and 30.1 % for females in Lideta. Employed persons for government, NGO's and private enterprise constitute 16.5 % for males and 8.4 % for females.

With regard to the tenure status and conditions of the housing unit, 63.6 % of the houses are Kebele houses, whereas 20% of the houses are owned privately. Of all the houses in the sub-city, only 17.1% are in good conditions. Of the rest majority that is not in good conditions, 69.9 % needs repairing.

In most areas of Lideta, the WATSAN status is not much different from Addis Ketema's. According to the survey result, nearly 89 % of the housing units in Lideta use tap water, but it does not describe in detail, for example, as to how many have private connections. However, another study in sub-city indicated that nearly 80% of the residents do not have secured or communal tap water. This is mainly because the settlements are unplanned, dense and the majority of residents are poor to get private connection (Tsion: 2005).

With respect to toilet facility, only 5.3 % of the housing units in Lideta have private toilets. About 28.9 % of the housing units have shared toilets while 62.6 % have no toilets. Nearly 21 % of the housing units use public toilets. Among the housing units who have no private toilets, 41.5 % have no places to construct toilets. Availability of public toilets constitutes 2.4 %.



Map 3.2: Map of Lideta Sub-city[14]

There are numbers of NGOs working in inner Lideta sub-city. Of these, CARE and IHA-UDP had been very active in residential area upgrading between 1990 and 1997.
Information obtained from the sub-city shows that the selected Kebele 09/10 is one of the poorest and densely populated Kebeles in the sub-city. It has today about 5,100 housing units with 41,000 inhabitants. The estimated net population density, according to recently conducted study, is 1300 people per hectare(ibid). Overcrowding is prevalent in the Kebele. In many cases, compartments are made both horizontally and vertically within one or two room housing units to accommodate as many families as possible.

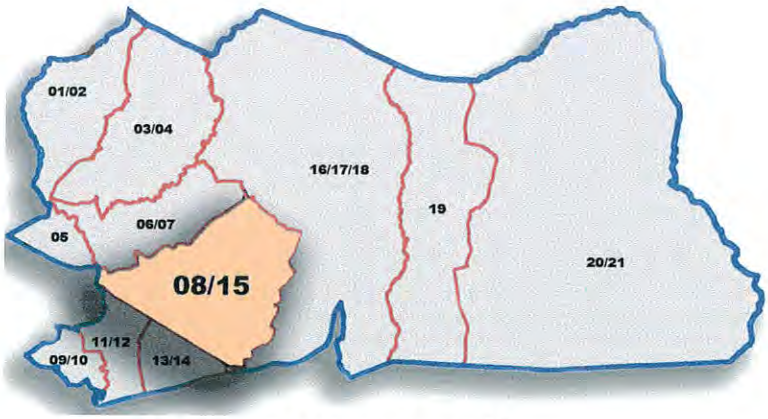
Tureta Sefer which is in the middle of Kebele 09/10 shares all the typical characteristics of poverty in the Kebele. The neighbourhood, like Temenja Yaj, is relatively old inner-city settlement, situated on the road from the Tekle Himanot church to Abinet along side to the "Chid Tera" area. As the settlement is in the heart of the city, relatively convenient public transport systems are within the walking distance. In spite of its very favourable location, similar to the former Kebele, it is observed that the settlement is a mixture of dirt, deteriorating structures, inadequate services and congestion of all kinds.

[14] The highlighted part shows the selected Kebele

3.1.3 Yeka Sub-city and Kebele 08/15

Yeka sub-city is found in the North Eastern part of the city. There are 337,575 inhabitants within its 20 Kebeles with a gross density of 220.5 inhabitants per hectare (UN-Habitat: 2007). The major part of the sub-city is found in the expansion areas of the city and includes rural Kebeles. Residential use is the dominant land use in the area. Various housing development projects are implemented, mostly serving the middle and high-income residents of the city. There also exist several informal housing developments at the periphery of the sub-city. Although no data can be found on the exact magnitude, most estimates put the proportion of the city's population that is living in informal settlements of Yeka as one of the highest in the city.

The socio-economic vulnerability assessment survey of Yeka sub-city (AASCAB: 2006) shows that more than half of the residents (54 %) are concentrated in the age group 11 – 30 years for both sexes. Regarding, their marital status more than half of the inhabitants (65.1%) have never married while 30% are currently in union. Divorced and widowed/widower cases consists 4.7%.



Map 3.3: Map of Yeka Sub-city[15]

[15] The highlighted part shows the selected Kebele

In Yeka, illiteracy is higher for females than males. Of the illiterates 23.4 % are females and 18.5 % are males. As the results indicated, around 1/5 of the residents have reported that some of their children are learning while some are not. The major reason is found to be financial insecurity.

The occupations and employment status shows that 63.7% of males and 36.3 % of females in the sub-city are government employees. NGO employees constitute 50.3 % and 49.7 % for males and females respectively.

On the subject of household income and housing conditions, the study indicates that 52.5% is generated by husbands whereas wives constitute 18.4%. The tenure status and conditions of the housing unit show that 65.3 % of the houses are owned privately while 23.6 % are Kebele rented houses. Concerning the assessment of house conditions, it's found out that, 45% of the houses are in good conditions. From the houses, which are not in good conditions, 40.3 % need repairing.

Regarding toilet facility the report shows that about 68.3 % of the housing units in Yeka have private toilets while about 17 % have shared toilets. Among the residents, 36.8 % have no toilets of these 37% uses fields as a toilet while 16.6% of the housing units use public toilets. Among the housing units who have no private toilets, almost 40% have no places to construct toilets.

The survey result shows that 93.5% of the housing units in Yeka sub-city use tap water, while 3% uses water from well. Among those who have no private water supply, 61.2 % travel up to 300 meters long to fetch water while 4.6 % travel more than 500 meters to fetch water from wells. Though the water supply coverage reaches 93.5%, many parts of the sub-city have difficulty to get adequate water supply due to the hilly landscape. The problem is worse in informal settlements as they are not entitled to get water connection.
The selected Kebele 08/15 of Yeka sub-city is situated behind Yeka Michael church and is about 6 kilometers from the city center. Data from the Kebele shows that, it is the home of 31,000 residents.

Most of its physical infrastructure is in a poor condition. There is only one main gravel road that connects the Kebele to the rest of the city and there are only two short length tarmacs to connect it with the other neighbouring Kebeles. Most are rough roads. Significant part of Kebele 08/15 is occupied by informal settlers with relatively poor living condition. Since informal settlements are not recognized as legal settlements in the city, provision of basic services to these areas is a complex issue.

Kebele 08/15 is also characterized by inadequately serviced and poorly constructed housing units with substandard material. In this informal settlement, inhabitants are susceptible to flooding and fear of eviction is prevalent. As there is no problem of density in this Kebele, the sanitation problem is not surfaced out like the other two selected Kebeles but there still is a huge problem. Though there are 111 NGOs engaged in different sectors of development activities in the sub-city there is no one in this particular Kebele.

The selected neighbourhood, Addisu Bono, is located at the upper most part of Kebele 08/15 and has about 285 households.

In general, the majority of the residents of the neighbourhoods under discussion live in low-grade and congested slums characterized by high population density, poor housing conditions, low socio-economic status, poor access by vehicles and pedestrians and lack of proper water supply and sanitation. The majority of the people in all the neighborhoods are dependent on daily labour. Most are leading hand-to-mouth living conditions.

Thus, it can be said that all the selected neighbourhoods are places where different faces of poverty come up to one to constitute environment unfit for human habitation.

The population composition of the neighbourhoods is heterogeneous, comprising various ethnic groups with different languages and cultural backgrounds.

3.2 The Sample Population

3.2.1 Physical and Environmental Conditions

Physical and environmental conditions associated with demographic and socio- economic characteristics such as location, housing characteristics, basic urban services and tenure status of the study population constitute the most visible indicators of the type and standard of living of a community.

Concerning the physical conditions of the housing units, it ranges from very poor (those needing major repair) 72.5% in Temenja Yaj to better ones in Tureta Sefer (30%); which are rehabilitated by IHA/UDP. Most of the houses of the inner-city case study areas are predominantly dilapidated mainly because of old age and lack of periodical maintenance.

Table 3.2: percentage Distribution of Physical Conditions of the Housing Units

Physical condition of the house	Temenja Yaj (AddisKetema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Housing Units	Total %
	Housing Units	%	Housing Units	%	Housing Units	%		
Good	3	7.5	12	30.0	13	32.5	28	23.3
Poor	8	20.0	10	25.0	19	52.5	37	30.9
Very Poor	29	72.5	18	45.0	8	15.0	55	45.8
Total	40	100.0	40	100.0	40	100.0	120	100.0

As presented in Table 3.2, houses with very poor conditions are predominantly Kebele owned houses (72.5% in Temenja Yaj and 45.5% in Tureta Sefer) which have never got major maintenance that can improve the condition either by the government or by the tenants after the confiscation of the houses 32 years ago. In Addisu Bono of Yeka, on the other hand, the situation is some what different from the inner city slums. Here, poor housing condition is observed mainly not because of old age or lack of maintenance but because of the poor construction material and poor finishing.

In all the neighbourhoods, though, mainly used building materials are of poor quality and, by their very nature need frequent maintenances.

Table 3.3: Percentage Distribution of Type of Construction Materials

Type of construction materials	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Housing Units	Total %
	Housing Units	%	Housing Units	%	Housing Units	%		
Wood and mud	27	67.5	25	62.5	34	85.0	86	71.7
Cement blocks	8	20.0	12	30.0	-	-	20	16.7
Others	5	5.0	3	7.5	6	15.0	14	11.6
Total	40	100.0	40	100.0	40	100.0	120	100.0

As Table 3.3 shows, the great majority of the houses (71.7%) are constructed of wood and mud. Whereas, cement blocks constitute, only 16.7%, of these the two third are found in Tureta Sefer which again indicates the houses which are in a better position are only those rehabilitated by an NGO.

Table 3.4: Percentage Distribution of Housing Units by Tenure Status

Type of Tenure	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Housing Units	Total %
	Housing Units	%	Housing Units	%	Housing Units	%		
Owner Occupied	3	7.5	2	5.0	18	45.0	23	19.2
Rented from Kebele	29	72.5	22	55.0	5	12.5	56	46.6
Rented from Private HH	5	12.5	4	10.0	15	37.5	24	20.0
Rent Free	3	7.5	12	30.0	2	5.0	17	14.2
Total	40	100.0	40	100.0	40	100.0	120	100.0

From Table 3.4, it may be observed that the share of houses rented from the Kebele is the most dominant type of tenure in the inner city slums (72.5% and 55% in Temenja Yaj and Tureta Sefer, respectively). Things are different in Addisu Bono where the majority of

housing units are owner occupied (45%). It is also interesting to note that though the informal settlements are dominant in Addiu Bono they are found mixed with the formal ones owned by the Kebele.

In the informal settlement of Addisu Bono, the majority of the inhabitants are poor who have no chance of getting affordable housing through the legal procedure; they simply squatted and constructed a house with very cheap material on available open land and unsuitable location (steep slope with a risk of flood and land slide, forested and devoid of basic urban services). The other dominant feature, particularly in Tureta Sefer, is rent free dwellings which constitute almost one third of the neighbourhood[17].

In regards with size of the houses, about two thirds are one room types while units with three or more rooms make up only 2.5 % of the total. The rest almost one third are of two rooms. This situation by it self tells how congested the dwellings are especially when we compare it with the household size and composition.

Like housing facility, other basic urban services such as water supply, energy for cooking and lighting are also costly, in all the study areas, in absolute and relative terms than for better-off groups. In addition to what they share with inner-city slums, the residents of this informal settlement, live in an unsafe and unstable environment which lacks basic social services (for example affordable health center and kindergarten and primary school in the near by location) and suffer from the absence of tenure security, and have no legal claim in case of eviction.

[17] One of the reasons is several residents of the Kebele 09/10 are beneficiaries of IHA/UDP's (a local NGO) rehabilitation project

Marital Status

In terms of marital status (Figure. 3.2), it was found that nearly 40% of the respondents were married while about 21.6% of the respondents were divorced. Single respondents constitute 20% and the rest (19.2%) are widowed.

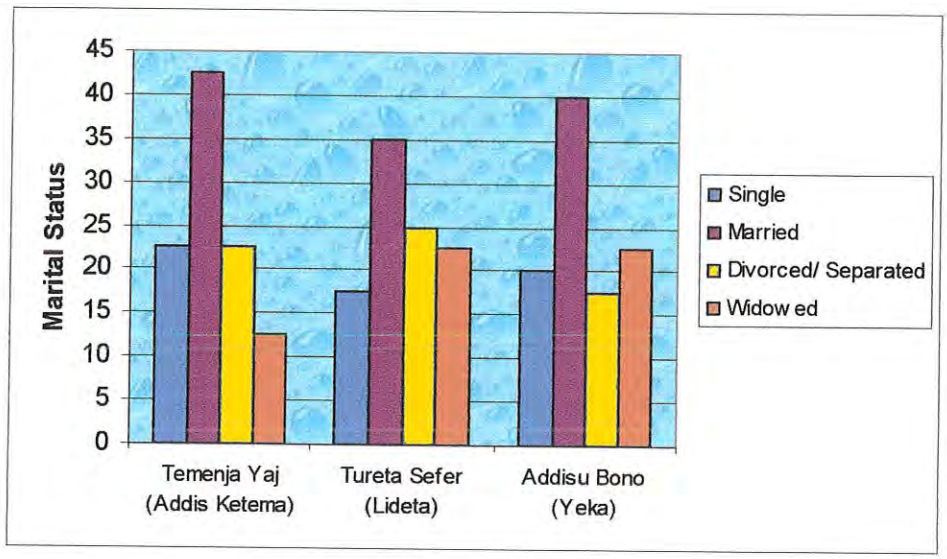


Figure 3.2: Percentage of Respondents' Marital Status

Household Size and composition

The average household size of Temenja Yaj, Tureta Sefer and Addisu Bono was about 5.8, 5.9 and 5.3 per household, respectively. Approximately 45 % of the sample population live in small households of 5 persons or less and 46 % are heads of medium-sized households of six to ten persons. Only 8 % of households are composed of eleven persons or more. Given the city average household size of 5.1 persons per household in 1994, this situation alone could indicate how these settlements are densely populated.

Regarding the composition of households interviewed Figure 3.3, shows that, about 60 % of the interviewed poor women in Temenja Yaj and Addisu Bono; and 62.5 % in Tureta Sefer are either single or single with children and other adults.

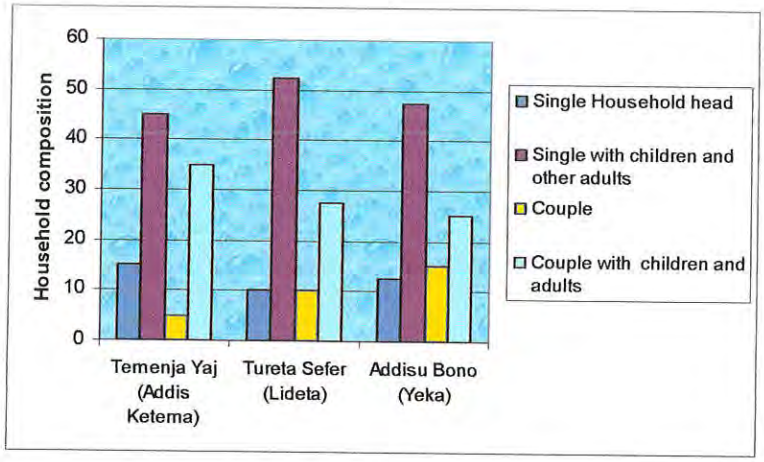


Figure 3.3: Percentage of Composition of Households

Educational Attainment

The findings of this study show that the sample population is one with very low levels of education. As shown in Table 3.6, of the respondents 31.6 % have no formal education. This outcome is higher than the city's average educational status of women, which shows 14.7% are illiterate (UN-Habitat: 2005). This result coupled with the fact that the majority, about 54.2 %, having only primary education, reiterate the general low levels of literacy in the slums and informal settlements. The highest level of education in the case study neighbourhoods is completing high school (2.5 %) while those completed grade eight account 11.7 %.

Table 3.6: Respondents' Educational Status

Educational Status	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
No formal education	14	35.0	13	32.5	11	27.5	38	31.6
Primary school	23	57.5	22	55.0	20	50.0	65	54.2
Grade 8 Complete	3	7.5	4	10.0	7	17.5	14	11.7
Grade 12 complete	-	-	1	2.5	2	5.0	3	2.5
Total	40	100.0	40	100.0	40	100.0	120	100.0

Thus, it is interesting to note that, the relatively lower rates of literacy among the interviewed women in the study areas reveal the fact that poor areas are mostly composed of low income families that had either relatively less access to educational services or most of them dropped out early in order to work to supplement household income.

Employment Situation

In order to get adequate information on the type of the respondents' occupational activities, they were asked first, about their employment status and then, if employed, the type of occupational category they belong to. But it was not easy to classify them according to their status of employment. This is mainly because many poor women who had no regular or permanent job consider themselves as unemployed.

As presented in Figure 3.4 in terms of employment status there seems to be similarity among the centrally located formal settlements and the informally developed peripherally located neighbourhoods while there is slight difference in the proportion of unemployed people. In all cases nearly 40 % of the respondents were employed. Whereas the percentage of the unemployed people ranges from about 33% in Tureta Sefer, 38% in Temenja Yaj to 45% in the relatively recently established Addisu Bono area. It is also interesting to observe that there seems to be a correlation between the age of the settlements and the proportion of the retired and disabled people in the area. This accounts about 23% Temenja Yaj and 25% in Tureta Sefer, while the corresponding figure for Addisu Bono is only 15%. In general, as typical to low-income neighbourhoods and women headed household, the rate of unemployment is very high. On average the great majority, about 59%, of the interviewee were unemployed, retired or disabled. It was only 41% that were employed both formally and informally, clearly showing the very low level of the economic status of residents.

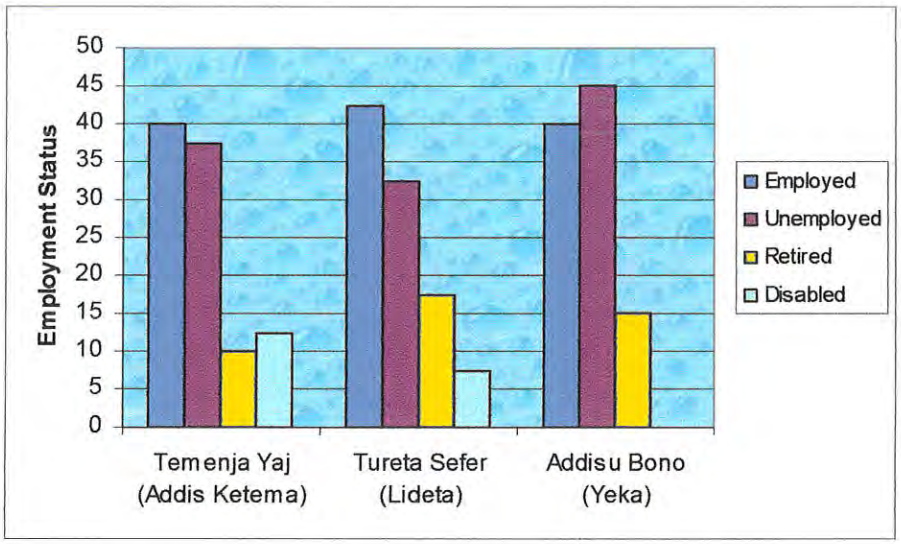


Figure 3.4: Percentages of Respondents' Employment Status

The second observation with respect to employment is related to their occupation types. The evidence suggests that the poor women in the poor neighbourhoods are engaged mostly in informal business activities such as petty commodity trading, street vending, selling *Injera*, brewing homemade liquor, working as casual labourer like washing clothes and baking Injera as well as domestic service and/or prostitution. Poor women in these areas work hard to earn a living because they see that there is no easy entry into the employment market. It is also noted that prostitution and renting own room for a day is significant in Temenja Yaj of Addis Ketema; petty trading and domestic service in Tureta sefer of Lideta; and casual labour in Addisu Bono of Yeka.

Figure 3.5 demonstrates that, on average, it was only about 10% of the respondents that were employed by the formal sector as civil servants. The rest, about 90% earns income from the various informal means and casual employment. Among this the large proportion are the daily labourers (about 36% and petty traders (25%). Even though many are able to make living by working hard, the most unfortunate have few options other than begging (about 9%) and prostitution (8%). These findings support the argument that the selected neighbourhoods are very poor and represent the vulnerability of women.

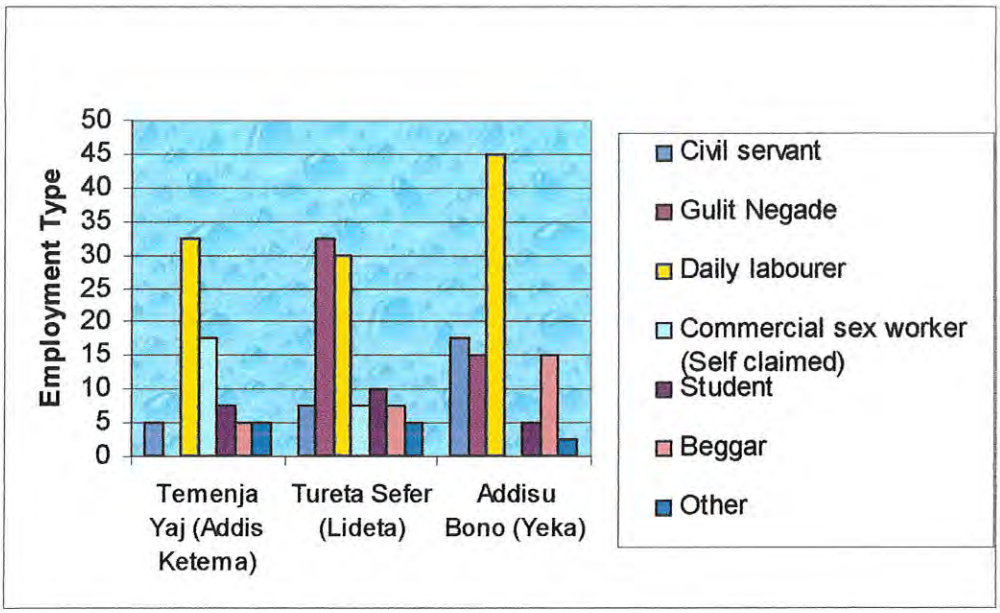


Figure 3.5: Respondents' Employment Type

Income Situation[18]

In this study, income refers to the total amount of periodic earnings both in cash and kind that is available for domestic consumption. It is evident from the employment situation analyses a substantial percentage of the respondents earned their income through self employment and/or from diversified sources. In such an informal economy, it was extremely difficult to estimate the real amount of the household income. Moreover, some of the respondents were unwilling to declare their income and in some other cases they have shown the tendency of either to understate their income and inflate their expenditure, possibly because of fear of taxation or hope of getting support. The distribution of households by income range is provided in Table 3.7.

[18] To reduce survey response bias in income reporting, instead of asking for a precise income figure, respondents were asked to indicate which of the following six income brackets they were in: <200; 200-300; 300-400; 400-500; 500-600; and >600.

Table 3.7: Distribution of Households by Income Range

Income range in *Birr*	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
<200/ month	15	37.5	18	45.0	9	22.5	42	35.0
200-400/month	7	17.5	13	32.5	14	35.0	34	28.3
401-600/month	15	37.5	7	17.5	16	40.0	38	31.7
>600/month	-	-	-	-	-	-	-	-
Do not know	3	7.5	2	5.0	1	2.5	6	5.0
Total	40	100.0	40	100.0	40	100.0	120	100.0

As could be observed from Table 3.7 in all the studied neighbourhoods there was no any household that earns a monthly income of more than 600 *Birr* per month. More than a third of the households interviewed earned a monthly household income of less than 200 *Birr*. Of this category the highest proportion, 45%, was lived in Tureta Sefer, which is followed by Temenja Yaj with nearly 38% and 22.5% in Addisu Bono. The informal settlement, Addisu Bono, seems relatively better off as the proportion of the households in same category account for slightly less than 23%.

On the other hand, of those households who earned between 401 and 600 *Birr* per month, the least were found in Tureta Sefer with only about 17.5%, while the corresponding figures for Temenja Yaj and Addisu Bono were 37.5% and about 40%, respectively. The result shows the very low income level of the studied neighbourhoods in general and households interviewed in particular.

Household expenditure

Like the income, the respondents have no clear figure or do not want to tell the exact amount of their monthly or daily expenses. The figure below shows what the respondents told about their monthly household expenses.

Table 3.8: Respondents' Average Household Expenses

Expenditure Type	Temenja Yaj (Addis Ketema)	Tureta Sefer (Lideta)	Addisu Bono (Yeka)	Total expenditure in *birr*	Total expenditure in percentage
	Average in *birr*	Average in *birr*	Average in *birr*		
Food	192	178	184	184.7	60.3
Fuel	37	33	35	35.0	11.4
Water	39	36	47	30.6	10.1
Sanitation	3	3	-	2.0	0.7
Rent	7	6	33	15.3	5.0
School fees	5	4	6	5.0	1.6
Others	42	35	24	33.6	10.9
Total expenditure average in birr	325	295	299	306.2	100.0

The above table indicates that the average total household expenditure per month is nearly 300 *Birr* and their average total household expenditure on water is almost 30 *Birr* which takes 10.1% of their monthly expenditure. All the neighbourhoods' expense on sanitation is insignificant when we compare it with other expenses—it stood only 0.7% of their expense in average and households in Addisu Bono spend no money on sanitation. As it is the case in all very low-income neighbourhoods and households, the larger proportion, slightly more than 60% of their expenditure, is to satisfy their basic food needs. This is followed by expenditures on fuel (about 11.4%) for cooking and lighting and water which is the other basic human need constitutes 10% of their expenditure. The average expenditure on house rent to satisfy their shelter needs accounts about 5%.

3.2.3 Essential Priorities of Poor Women

The survey confirmed that in slums and informal settlements, poor households' access to various basic infrastructure and social services is highly inadequate. More than 25 % of the 120 sample households reported that they do not have access to any of the following basic

services: (a) private piped water supply; (b) private toilet, defined as one that is not shared with another household; and (c) organized public or private collection of garbage. Only 1 % of the sample population has access to all three of these services. The respondents were asked to rank six essentials, including health and education, in order of priority. Figure 3.6 presents the results in the form of frequency distributions for the entire sample and by household welfare level.

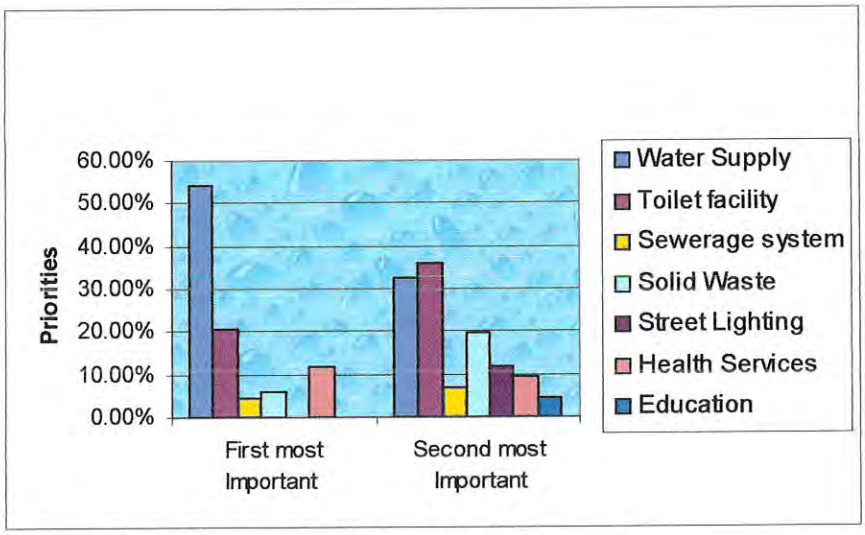


Figure 3.6: Essential Priorities of Poor Women

Because the frequency distributions of priorities of essentials across the three poor areas are very similar, the discussion here highlights the values for the entire sample. The results indicate that development of a water supply system is by far the top priority for the households in the sample as a whole. Toilet facility and solid waste management follows.

The rest of this study focuses on the WATSAN situation and shows why poor women give such a high priority to WATSAN issues and how inadequate provision affects them.

CHAPTER 4: Analysis of Findings

4.1 The Water Supply Situation

A household is considered to have access to safe water supply if it has sufficient amount of water for family use, at an affordable price, available to household members without being subject to extreme effort, especially to women and children(UN-HABITAT:2003). Global Water Supply and Sanitation Assessment 2000 report, too, categorize these in five essential characteristics: accessibility, safety, availability, affordability and sufficiency of water (WHO/UNICEF/WSSCC: 2000). This section questions whether the requirements are met in the case study neighbourhoods.

4.1.1 Accessibility

Each nation sets its own definition of 'access' to water. In some countries, it means piped water in each home, in others a well within half an hour's walk. Definitions also differ between urban and rural areas. For urban settings, according to WHO, water is considered as reasonably accessible when it is in the home or in a distance of not more than 200 meters from a house to a public tap (WHO: 2000). But, according to UN-Habitat, the definition of accessibility of water includes variables as cost and quality.[19] The organization in its The State of the World's Cities Report of 2006/07 showed that, in Addis Ababa, the proportion of low income urban residents with access to water dropped from 89 to 21 % when the definition of "access" include these variables.

In all cases, accessibility of safe water implies reduced burden on people, mostly women, who collect water from available sources. It also implies reduced burden of water-related diseases and improved quality of life of the slum dwellers and informal settlers. Primary water source distance and collection time are the important variables in accessibility.

[19] Here, however, cost and quality are discussed independently.

Primary Water Source

The primary source of water for all the selected slums and informal settlement is piped water supplied by Addis Ababa Water and Sewerage Authority (AAWSA). As table 4.1 shows 84.2% do not have private connection. They access their water either from private vendors, shared connection or public taps 50.8%, 3.3%, and 25.8%, respectively.

Many of the worst-off residents of the case study neighbourhoods who do not have private water connection have no choice but to turn to informal, small-scale, private entrepreneurs.

Table 4.1: Respondents' Primary Source of Water

Primary source of water	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
Private connection	10	25.0	9	22.5	-	-	19	15.8
Shared connection in the compound	1	2.5	3	7.5	-	-	4	3.3
Private vendor	21	52.5	22	55.0	18	45.0	61	50.8
Public tap	8	20.0	6	15.0	17	42.5	31	25.8
Protected dug well	-	-	-	-	5	12.5	5	4.1
Total	40	100.0	40	100.0	40	100.0	120	100.0

The second major sources of water in the areas are public taps which covers 50.8% of the sample women. The taps in the inner-city slums are built by non-governmental organizations: namely IHA/UDP in Tureta Sefer(Lideta), Christian Children Fund in Temenja Yaj, Addis Ketema; whereas the one in Addisu Bono, Yeka is built by the government.

Only 15.8% of all respondents have an individual in-house connection. The protected dug well users are 4.1%. The least means of getting water is shared connection in the compound which covers only 3.3% of the respondents. This figure does not take into consideration, women who use different sources of water for different purposes e.g. tap water for drinking and cooking, rivers or unprotected dug well for washing their bodies or clothes.

The household survey also shows higher dependency on vendors among the poor women followed by public taps. Most of the private vendors themselves are poor who are connected for domestic use but sell water to make a living out of it.

It was found out that most households use more than one alternative water supply, even those who are connected to AAWSA, due to several reasons including water shortage in the city.

Distance from Primary Water Source

With respect to distance20, the data discloses that 36.7% of the sample population draws water either in their premise or in less than 50 meters. While a quarter of them need to go up to half a kilometre, 23.3% of the respondents travel between 50 and 100 metres. Those who travel far (more than 500 meters) are 18% and all are from Addisu Bono neighbourhood. Figure 4.1 reveals no one from the inner city slums need to walk more than 500 meters; and again no one from the informal settlers in Yeka gets water in less than 50 meters. If we compare the inner city with the periphery, 55% of poor women in slum get water in less than 50 meters while 85% of their counterpart in the informal neighbourhood could not get with out walking at least 100 meters.

[20] All the distances described here reflect only the "normal" distance and when using their primary source. But whenever there is interruption, particularly in Addisu Bono and Temenja Yaj they need to walk more than one kilometre.

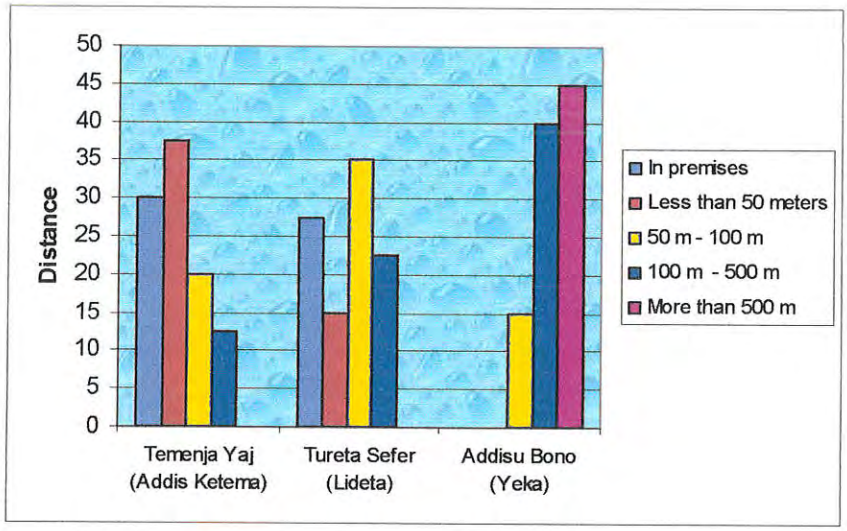


Figure 4.1: Respondents' Dwelling Distance from Primary Water Source

Collection Time

Collection time varies significantly by the primary source that households use. In the studied inner city slums, those with private connections spend only about five minutes on water collection daily, those relying on public tap spend about 45 minutes to 3 hours waiting on a queue, and those who buy from water vendors spend about 15 minutes per day on this task. But, the other poor women in Addisu Bono neighbourhood spend about three hours daily on public stand and about 45 minutes to buy from vendors. This time taken to fetch water, as compared to the ideal five minutes (WHO/UNICEF/WSSCC: 2000), is 9 to 45 times longer.

Fig 4.2: These Women, Like Most Women of Addisu Bono, have to Carry Water for Long Distances. (2007)

4.1.2 Sufficiency

According to WHO (2002), the water supply can be labelled as sufficient when the amount of drinking water that is available regularly to support an individual's daily basic needs required for drinking, cooking, and other domestic purposes satisfy her/his personal hygiene. Recommended values are 20 and 50 litres per day per capita for rural and urban residents, respectively. The following table shows status of water usage in a day per household in the case study areas.

Table 4.2: Respondents' Household Status of Water Usage[21]

Daily usage of water in litres	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
< 10 litres	13	32.5	15	37.5	18	45.0	46	38.3
11-20	4	10.0	6	15.0	7	17.5	17	14.2
21-30	7	17.5	8	20.0	9	22.5	24	20.0
30- 40	-	-	4	10.0	4	10.0	8	6.7
40-50	5	12.5	3	7.5	2	5.0	10	8.3
50-60	5	12.5	2	5.0	-	-	7	5.8
>60	6	15.0	2	5.0	-	-	8	6.7
Total	40	100.0	40	100.0	40	100.0	120	100.0

Table 4.2 demonstrates only the daily usage of water at the household level. If this is shared for each person (taking 5.6 persons as average household family size) the scenario will become too different. The majority, 79.2%, of the poor women reported consumption level below 40 liters daily per household becomes about 7 lpcd and 12.5% of the respondents who use 50 litres of water per household mean about 10 lpcd. The rest (8.3%) gets less than 2 lpcd.

[21] This includes water from all types of sources.

This means none of these studied urban poor women are currently able to access the required minimum sufficiency level-- not even a fifth. It is also far behind the official city water consumption level which is 38.3 lpcd.

The data also makes clear that, the type and location of primary water source is one of the most significant factors that affect consumption. Sources provide water at varying prices with clear difference. Thus, AAWSA private connection users consume significantly higher quantities of water per household and per person than those relying on alternative sources.

The household survey provides both a qualitative and quantitative measurement of the sufficiency of their current water consumption. Given the gap between the ideal water consumption and actual consumption levels, it is not surprising that only 4.2% of the entire sample rated their water as "always sufficient" while 60% of respondents stated "insufficient at all times".

Table 4.3: Summary of the Sufficiency of Water

Sufficiency of water	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
Always sufficient	3	7.5	2	5.0	-	-	5	4.2
Insufficient sometimes	8	20.0	6	15.0	-	-	14	11.6
Insufficient mostly	16	40.0	9	22.5	3	7.5	29	24.2
Insufficient at all times	13	32.5	23	57.5	37	92.5	72	60.0
Total	40	100.0	40	100.0	40	100.0	120	100.0

The figures in table 4.3 reveal that all water sources clearly fail to meet the needs of the poor women who depend on them. Particularly, it is those who buy water from vendors and 92.5% of Addisu Bono residents (who get water once in 24 hours, before dawn), unmistakably judged their water to be insufficient.

Means of Water Transportation

As it is stated by most of the respondents (77.5%) of Temenja Yaj and Tureta Sefer and from observation, the main means of carrying of water is plastic bucket with the capacity of 15 litres. In Addisu Bono, however, 92.5% of the respondents use jerry can with the capacity of holding 20-25 litres. When it is generally seen in all of the neighbourhoods, it can be understood that plastic bucket and jerry can are preferable to the usual pot "*Insira*" in Addisu Bono because of its ease to hold water on steep slopes.

4.1.3 Availability

The water supply must be regular so as to meet personal and domestic needs (e.g. drinking, personal hygiene, clothes washing, and food preparation). Delivery duration, schedule and pressure are the factors that determine the availability of water. When and for how long water is available to women in poor neighbourhoods have significant consequences for the quantities and accessibility of water available.

Delivery Duration and Schedule

In the inner city slums, particularly for those who have private and shared connection, there are times that water is supplied on alternate days or once in three or four days as the pipelines in these areas are, mostly, old and do not get prompt repair and due to the water shortage in the city. For most public tap users, water flows for no more than 2- 4 hours each day, and almost all public tap users receive water daily, though there are days without water. In the informal settlement, on the other hand, duration of supply depends on the time of the day i.e. no water after 6:00 AM. That is why, surprisingly, only 4.2% of the sample responded that they receive 24-hours water.

Figure 4.3: No matter whether it is Cold, Rain, Night, Long Queue or Difficult Terrain, to Fetch Water and Satisfy the Household Need is Women's Responsibility. (Addisu Bono: 2007)

The schedule of water delivery also significantly affects availability of water particularly for the public tap users; most of the time it starts from 7:00 am and 1:00 pm in Temenja Yaj neighbourhood, 10:00 am and 2:00 pm in Tureta Sefer and stays for two hours in average. The Addisu Bono case is different. It starts from 3:00 am and goes only up to 5:30 to 6:00 am in the mornings. Though, these timings do not work some times as the tap attendants often delay opening the taps, particularly during the rainy season or due to personal reasons. This shows that the poor women are not able to use water whenever they need but whenever it is released from the source.

Pressure

Pressure is an important issue among water consumers, since low pressure greatly increases time burden, lowers available quantity, and can lead to conflict over water at public tap or among neighbors in the case of shared connection.

Less than one fifth of respondents reported strong pressure. The majority (between 60-70% of all users) gave pressure the lowest rating. Public taps have the highest percentage

of respondents whose water pressure is weak. Particularly in Yeka, because of poor pressure, women end up spending more than three hours in water collection and even go back home without it after waiting for their turn for hours. So to fight over turns is not uncommon. This compares poorly to the 30-45 minutes spent by women in Addis Ketema and Lideta, where water pressure is relatively stronger.

Focus group discussions also indicated that the quantity of water accessed from public water connections can be much lower in areas struggling with extremely low pressure and high numbers of families sharing. Women who use such troubled source of water consume less, and were forced to rely more heavily on vendors to meet their needs.

4.1.4 Safety

According to WHO, water can be considered safe if it is free from microbes and substances that constitute a threat to a person's health, and be of an acceptable colour, odour and flavour. "Safe" water includes treated surface water and untreated but uncontaminated water such as that from protected boreholes, springs and sanitary wells (WHO: 2000).

In this case, 80% of the respondents rated safety aspects of their water as 'high' or 'good.' Less number of respondents believe that their family has suffered from water related sickness instead there were much complaint about sanitation related diseases. There were only 11 such reports (9.2% of the sample) and of this six were from the informal settlement. Women that complained of poor quality water cited rusted pipes that are more susceptible to leakage and contamination as a probable cause. "The problem of aged infrastructure is aggravated by its close proximity to drainage, storm water and sewer lines", they said. Well had the lowest quality ratings of all the primary sources. For the respondents, perceptions of water as 'bad' appeared to be related with two main factors: the first, and perhaps most important, was that of water source; the second was the duration of water delivery (whether it was provided at 24 hours or not).

4.1.5 Affordability

In accordance with the Global Water Supply and Sanitation Assessment 2000 report, affordability must be ensured in terms of the direct and indirect costs of securing drinking water and it must not compromise the realization of other treaty rights. Therefore, discussion on water affordability should include not only the monthly water fees, but also the tariff in general, connection fees and opportunity costs of water procurement and AAWSA and non-AAWSA users' ability to pay.

Current Tariff Structure

According to AAWSA, the production cost of one cubic meter of treated water is 3.25 *Birr* while the tariff after it reaches the consumer is 1.75 *Birr*. The pricing is based on progressive rate for domestic customers, public fountain users and non-domestic customers. The cost of water starts at 1.15 *Birr* for up to 7 m^3 and reaches 3.15 *Birr* for 20 m^3. The charge for water from public water taps is a flat rate of 0.50 cents per cubic meter.[22] Of the 23 women who use private and shared water connection more than half said that their monthly water bill is below 10 *Birr*.

This shows that even though there are so many reasons for the women not to have water source using private connection (expensive connection fee, water supply shortage of AAWSA, etc..), the cost of water, for those who have the connection, does not have a visible impact on their economic capability.

Ability to Pay

The international community has suggested that no family should be forced to contribute more than 5% of their monthly income towards fulfilling their basic human right to water (World Bank: 2002). However, this research revealed that some households feel significantly burdened by their water bill, and may reduce consumption to minimize

[22] For details of the structure of AAWSA water tariff please refer Table 2.11.

costs, even when they are paying below 5% of their income. The qualitative data suggests that even 10 *Birr* per month can be a heavy burden for poor households.

In the studied poor neighbourhoods, 10 % of the households purchasing water from vendor and earning 400 *Birr* or less each month pay up to 10% or more of their monthly income. In-depth discussions with residents that depend on private vendors suggested that this rate may be even higher. Yet the poorest are paying much higher, particularly within the vendor category.

Further clarity emerges from Figure 4.4 that illustrates the average level of expenditure for all water sources. The extremely high bills paid by vendor users raise the average monthly cost for the entire category.

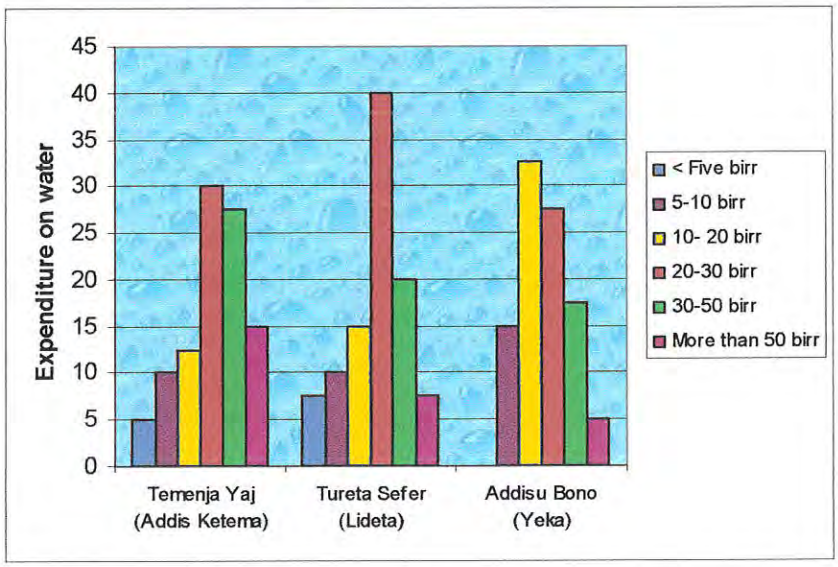


Figure 4.4: Respondents' Household Expenditure on Water

As we can understand from the quantitative data, too, a family of five consuming the ideal minimum level (50 lpcd multiplied by an average of five persons per household) would consume 7500 litres per month. At official AAWSA rates for domestic users, the monthly bill would amount to 13.67 Birr. In contrast, employing even the most average rates reported by the respondents of the two inner-city slums, (0.25 cents for 15 litres

Baldi), the calculation for the same quantity of water totals a minimum monthly expenditure of 125 *Birr*.[23] That means, at this rate, fulfilling their basic water requirements would cost 125 *Birr* per month. Thus, the poor women who cannot access the public water service pay 9.1 times higher prices than their counterparts connected directly to AAWSA. This goes much up to double times whenever there is a supply interruption in the neighbourhoods and for Addisu Bono inhabitants who usually have to pay 0.50 cents for 15 litres container.

The data also indicates, a significant minority -- 14.2% of the sample population – is spending more than 5% of their income each month on water. This percentage is not spread evenly across the whole sample population, but encompasses mainly the non-AAWSA user categories. Nearly half (42%) of those who depend on vendors are paying more than 5% of their incomes. A smaller percentage of shared connection users and public pipe users – 13.2% and 10.5% respectively – are paying more than this international indicator. Moreover, as focus group discussion participants from all the neighbourhoods indicate, poor women spend almost 15-40% of their incomes buying water.

This finding corresponds with the result of other studies. For instance, a study by UN-Habitat (UN-Habitat & GWA: 2005) found out that, in Addis Ababa, low-income purchasers from private water vendors in the city charged are 10 to 50 cents per 15 litres which is up to 50 times the sale price of the metered water that middle and upper income households used. Similarly, Calaguas & Roaf (2001) found that the poor in urban areas who are not served with a safe source often pay high costs with vendors typically charging up to 3 USD per cubic meter of water, which is 20-30 times more than the price which the served pay for water from a tap at home.

[23] AAWSA charges 1.15 up to 1.75 *Birr* per cubic meters; the vendors sell it back at least 16.75 *Birr* and 33.50 *Birr* (0.25 and 0.50 per Baldi respectively).

Connection fees and opportunity costs of water procurement

Data obtained from the poor women and various researches show that high water and sewerage connection fee related costs have been one of the major causes not to be connected privately. In Addis Ababa, subscribers for potable water are required to provide their own pipes and fittings at the time of subscription, while AAWSA supplies the water meters upon deposit of certain amount of money. In addition to the deposit, private connection at least costs 410 Birr (UN-Habitat & GWA: 2005) depending on the locations, proximity and convenience. Since the poor cannot afford to pay the high connection fee for private connection, they are forced to buy water from water vendors paying higher charges. Regarding sewerage line, too, the minimum connection cost is found to be 1800 Birr for six metres (ibid).

4.2 The Sanitation Situation

As has been stated under chapter two, sanitation holds various definitions in different countries and organizations. According to WHO, a household is considered to have access to sanitation, if an excreta disposal system, either in the form of a private toilet or a public toilet shared with a reasonable number of people, is available to household members. The basic minimum indicators are:

1. Proportion of urban families with access to adequate sanitation facilities;
2. Proportion of households using well-functioning private/public latrines that are connected to non-blocked sewer systems; or connected to septic tanks with sufficient capacity; or
3. Proportion of households that share a public latrine with more than one household (WHO: 2005).

More over, according to UNIFEM (2003), sanitation is not only the type and quality of provision for waste water and excreta disposal in the house but also the presence of neighbourhood-wide systems to avoid free-flowing waste water. For garbage collection, it highlights, the importance of public provision in promoting good practice in domestic

storage. It also points to the health risks associated with inadequate storm and surface water drainage.

Encompassing different aspects of sanitation, this research looks into the all rounded aspects of inadequate sanitation provision on the poor women. Hence, in this section, the three neighbourhoods' sanitation access, control and constraints, likewise sanitation knowledge, attitude and practices shall be discussed.

4.2.1 Toilet Facilities

Based on the above indicators it is not easy to give exact figurative information about the toilet access. The reason is that most of the Temenja Yaj and Tureta Sefer poor women mainly use shared pit latrine and when situations are not convenient, the collected data shows that, there are many respondents who use plastic bags or bed-pans.

Figure 4.5: A Familiar Feature in the Slums of Addis Ababa: A Public Toilet Block (Temenja Yaj: 2007)

In a similar condition, even those who have public toilet in their vicinity refrain from using it due to the toilet's uncleanness or by being shy. It is said that they use it only when they are under pressure or when it seems a convenient time (quiet hours).

Similarly, in the Yeka sub city's Addisu Bono neighbourhood, (even from the households that have poor standard latrine) there are situations when the women prefer to use the bushes. The main reasons for these are the latrines are either adjacent to another house with no well-covered wall or door that exposes and disappoints. Likewise, it gets filled very often as it is not dug deep enough and is used by many.

Not only in the inner-city slums but also in the informal settlement, the women discussants pin pointed that, due to the problem of doors, women and young girls cannot use the pit latrines all the time and they have to wait till it gets dark or use it early in the morning. They also said that most of the pit latrines have been constructed along the roadside and this as well makes them unusable during daytime.

More over, the pits have no cover slabs. In most of the latrines, there are no doors or have no locking mechanisms, while the roofs are rust with lots of holes, and hence not able to protect from rain and heat. The researcher has seen women lining up to use the communal latrines with doors. The cleaning of the toilets is done by women users on rotational basis. Despite this, it has been observed that the floor was very dirty and swampy, with urine and water on it. In one of the inner city neighbourhood it was also observed that, women held their noses with the end of their 'Netela'[24] to escape the stench, but they had no choice but to continue to use the pits.

Hence, Figure 4.6 shows toilet facilities that the interviewed women mostly use. At this point it is good to note that as there are some who can transparently express the situation there are also some who do not want to state their proper utilization place, not to expose them selves. For instance, as the utilization of plastic bags has great shame there were very few who were willing to express it. Instead, they preferred indicating that others use

[24] Traditional scarf

the plastic bag in their vicinities and get the plastic bags being thrown around. This, however, shows that bed-pan and plastic bag utilization is widely exercised in the areas.

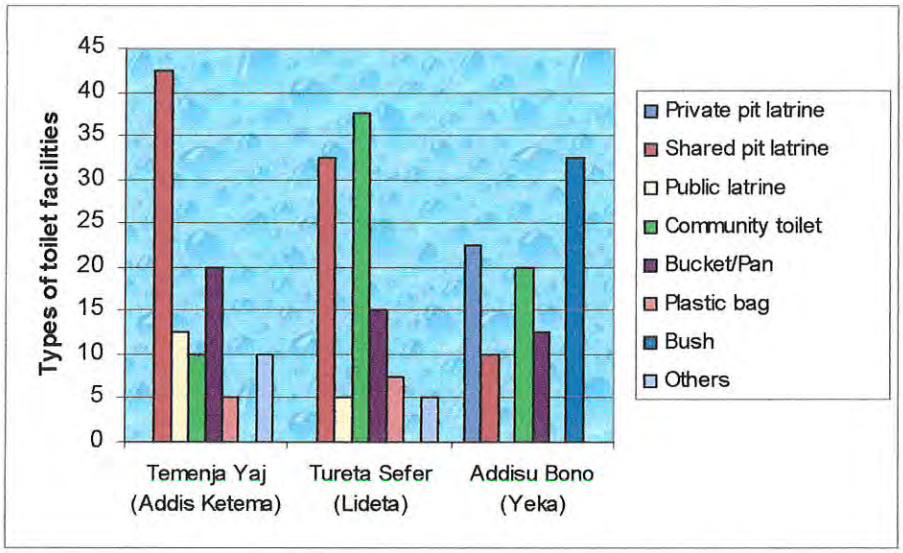


Figure 4.6: Category of Types of Mainly used Toilet Facilities by Respondents

The table illustrates only few (7.5%) use private pit latrine and about one third from the sample population (30%) use shared pit latrine. The one that occupies second place in the number of users (21.7%) is the community toilet constructed by aid organizations. These toilets are better in condition and serve 10-15 people in one partition, and are mostly preferable to the shared latrine, by the women. The use of bed-pans, plastic bags, bush and other alternatives collectively come up to 36%. This indicates how poor the toilet facilities are in the neighbourhoods.

Figure 4.7 shows the distance of toilet facilities from the respondents dwelling as the distance or nearness is one of the yardsticks to measure whether the facility is suitable or not.

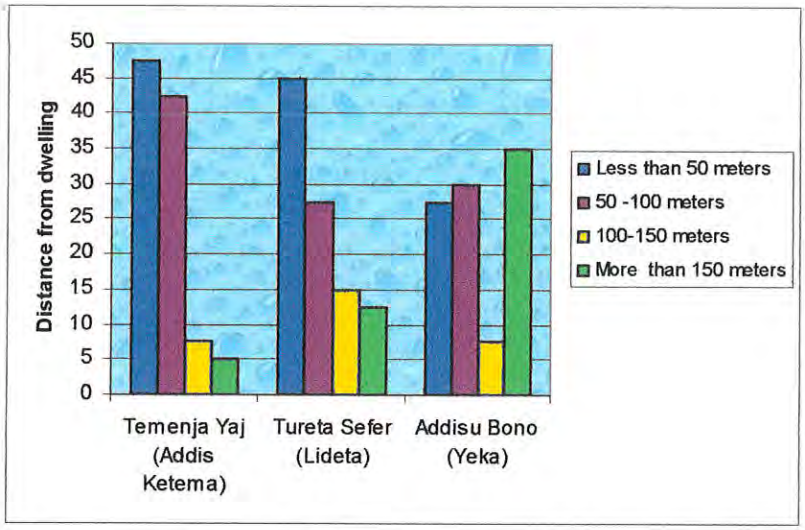


Figure 4.7: Respondents' Dwelling Distance from Toilet Facilities

It can be inferred from the above table, 40 % of the interviewed women have toilet facilities up to 50 meters away from their homes and 32.5% of them access toilet facilities within 50-100 meters and 17.5% of them are those who face long distance (those who walk more than 150 meters).

When we distribute by neighbourhoods, most of the toilet facilities are proportional in the inner city slums. But in Addisu Bono more than double of the inhabitants of inner slum women need to walk the longest distance in search of a place to defecate. The next point which has to be raised is that how many persons share the facilities.

Common latrines (serving 5 – 10 people and another serving 10 – 15 are very common (i.e 31.6% and 32.5% respectively). One fourth of the respondents share a single latrine made for more than 15 people.

Neighbourhood wise, 45 % of women in Temenja Yaj use shared latrines made for 10 – 15 people while 35 % use shared latrines made for more than 15 people. In Tureta Sefer, 42.5% share latrines made for 10 – 15 people while 40% of them use latrines shared by more than 15 people. The case in Addisu Bono differs in that 60% of them use latrines shared by 5 – 10 people while none of them are using latrines shared by more than 15 people. Table 4.4 shows respondents share of toilet facility.

Table 4.4: Respondents' Share of Toilet Facility

People sharing the toilet	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
Less than five	-		-		13	32.5	13	10.9
5-10	7	20.0	7	17.5	24	60.0	38	31.6
10-15	19	45.0	17	42.5	3	7.5	39	32.5
More than 15	14	35.0	16	40.0	-	-	30	25.0
Total	40	100.0	40	100.0	40	100.0	120	100.0

Asked about the cleanliness of the toilets, 13.3% said that the toilets are clean while 29.2% said the cleanliness is medium. More than half (57.5%) of them said that the latrines are not clean. Except the toilets constructed by NGOs, the construction (walls, floors & roofs) of all toilets are unsafe from health, privacy, cleanliness or safety point of view in such a way that some are on the verge of falling apart, some have doors that do not shut or no doors at all.

In the questionnaire the respondents were asked why they do not have their own toilets, too. The responses are summarized in following figure[25].

[25] For all of the respondents have responded that their financial capacity do not allow for them, incorporating this response in the table is found unnecessary.

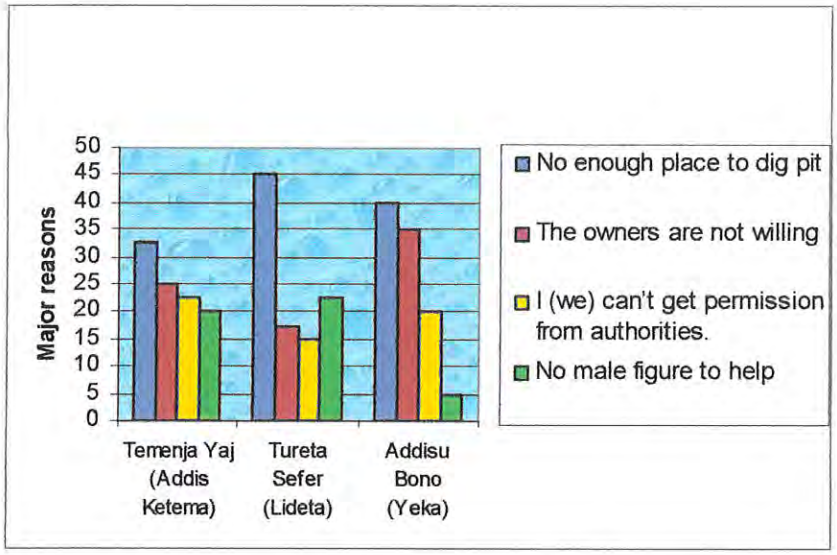


Figure 4.8: Respondents' Reasons not to have Better Toilet Facility

As indicated herein above, there are several causes as to why they do not have their own latrines. In some cases, most of the reasons come together to cause the household not to have better latrine. For instance, if financial capacity is created in case for those who lack it, they may not have a place to dig latrines, and if both the financial capacity and place is created for them, they may not get license.

Once again, in this research, it is verified that access to basic urban services both at individual and community level is a key fact that needs economic capability. The response of all respondents confirms lacking capacity is the main reason though there are other significant reasons.[26] For instance, the dwellings are jammed together 39.1 % of them stated that they can not dig toilets for lack of place, and 25.8% of them responded that they can not have toilet facility for they are lessees or dependants. Almost 20% of them mentioned problems related with license and 15.8 % of them gave reasons related with old age, loneliness, being handicap and the feeling of inability.

[26] The reasons that hinder better access to sanitation together with water shall be discussed in section 4.3.

When asked about the option of using the nearby public toilet, the women in the two inner city slums responded that they don't use them unless the inevitable comes. The main reasons for that are being shameful for a female to use public toilets and the social belief that a woman that uses public toilets is indecent. The dirtiness of the toilets being not suitable for feminine way of using toilets and the fact that many users of public toilets being men making it sexually scary for them to go there especially during the dark have been mentioned as reasons.

A question was raised for FGD participants whether they use hotel toilets at least when there is unbearable. They responded that this is applicable only for men and it requires great courage for women to use hotel facility. They also mentioned that even if they have the courage to use hotel toilets, the fee for one time use is 0.50 cents which is unaffordable for them.

4.2.2 Bathing Place and Practice

Of all respondents 50.8% of them took bath with in their own home, and 20.8% of them inside the house, but shared place with others. Among the respondents 21.7% of them stated that they wash their bodies in a covered place but outside of their home and 6.7% of the women have stated that they do not have a place to take shower at all. This shows that several women (28.4%) can not have places to take showers in privacy.

Questions were also raised whether the privacies are kept in the places they take shower. Most of the response, (72.6%), was affirmative that confirms their privacy has been kept. But the rest (28.4% of the women) responded that they do not believe that the place they take shower do protect or keep their privacy. In the responses of most of the respondents, they have stated that they take showers when there is no body around. Otherwise the alternative is not to take shower.

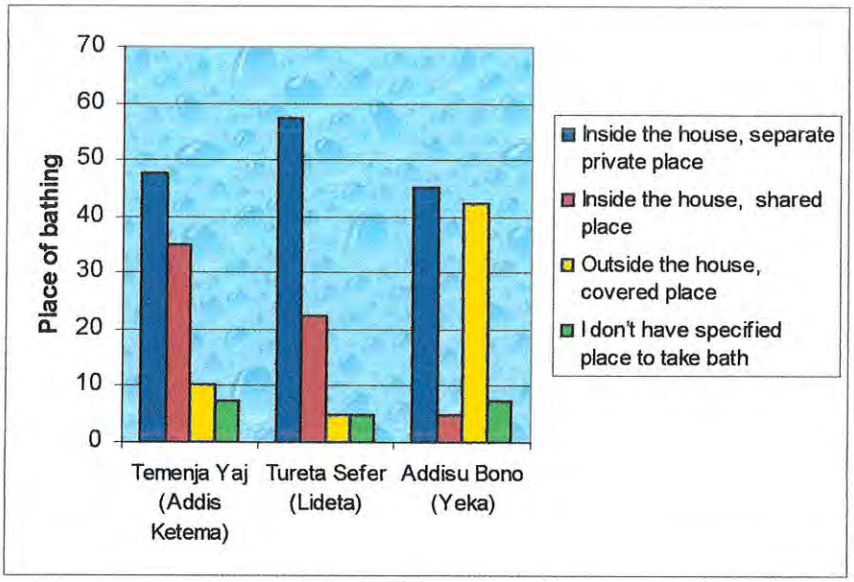


Figure 4.9: Respondents' Place of Taking Bath

4.2.3 Liquid Waste and Sewerage

The condition of liquid waste and sewerage in the three neighbourhoods reflects the ineffective sewerage system of the city. From observation, key informants and the collected questionnaires it can be remarked that Temanja Yaj and Tureta Sefer are the worst among the three research sites. The interviewed households place to dispose off waste water from bathing, laundry and cooking is stated in Table 4.5.

Table 4.5: Respondents' Place to Dispose off Waste Water

Place of disposing waste water	Temenja Yaj (Addis Ketema)		Tureta Sefer (Lideta)		Addisu Bono (Yeka)		Total Respondents	Total %
	Frequency	%	Frequency	%	Frequency	%		
Nearest ditch	5	12.5	3	7.5	6	15.0	14	11.7
Open drainage	16	40.0	22	55.0	11	27.5	49	40.8
On the road	15	37.5	13	32.5	9	22.5	37	30.8
Others	4	10.0	2	5.0	14	35.0	20	16.7
Total	40	100.0	40	100.0	40	100.0	120	100.0

The above figure shows that 71.6% of liquid waste that is coming from bathing, laundry and cooking is disposed in open drainage and on the surface of the roads instead of proper sewer. More over, all of the inner city and slums have shown similar characteristics and in the Addisu Bono neighbourhood the number of women who do not use specified places (for example latrines) are higher. In general, this shows that how liquid waste that comes from each house threatens the health and dignity of most of the urban poor women.

It was also observed that, most of the drainage systems are blocked by garbage which is disposed of near or in the drainage channels. The community once in a while takes the initiative of clearing drainage systems, but due to poor hygiene practices and lack of dumping space for garbage, the drainage systems get blocked again and the waste is seen flowing above the ditch. The women interviewed also emphasized that such conditions have been aggravated during the rainy seasons which on its part leads to different diseases.

The researcher have seen that there are closed ditches having manholes at intervals and intended for liquid waste disposal only, but have never been used properly. The open ditches are worst because all types of solid wastes, dead animals and plastic bags are disposed into them. Some dispose household wastes that are semi-liquid, others dispose kitchen wastes and some others dispose solid materials into the ditches. The water pipes are laid over the drainage ditches and within the drainage, and are susceptible for contamination and leakages.

Figure 4.10: An Open Ditch Filled with Sewer and Plastic Bags, Possibly with Human Waste.
(Tureta Sefer: 2007)

The drainage line which is meant for storm water collection has been used for disposing liquid wastes and this also contributes to a bad smell in the area. Some of the liquid wastes and drainage pipes overflow on the surface, and it is even difficult to walk around, but is being tolerated by the people living there.

4.2.4 Solid Waste

Like the liquid waste, all of the three neighbourhoods are infested with solid waste. The two inner-city neighbourhoods are much worse than the periphery's informal settlement as the forest and the natural environment still is used to dump the solid waste. Figure 4.12 shows the places where respondents dispose garbage.

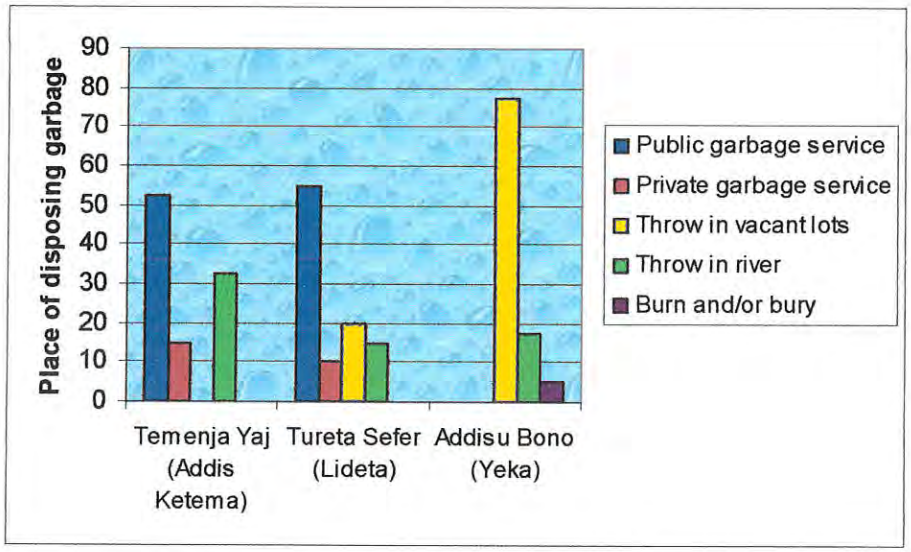


Figure 4.11: Respondents' Place of Disposing Garbage

As it is understood from the above table 35.8% of the respondents use public garbage and households that dispose the wastes in any places (32.5%) comes second; among the rest 21.7 % dispose solid waste in the river and 8.3% get their waste collected by garbage collectors; and only two women constituting 1.7% burry or burn their waste. This indicate that more than half (54%) of the women use unacceptable method of dumping their waste (river and vacant lots).

In addition to the quantitative data, it has been observed that dust bins or containers have been placed in one area only and this was said to be due to lack of open spaces convenient for loading and unloading of containers by trucks.

Besides, in the women's focus group in Turta Sefer, women specifically spoke about the problem of garbage. The women said that they usually keep solid waste in a tin, basket, or plastic bags for two to three days and then either threw it into the municipal garbage collection box, or the rotating garbage collecting truck. However, due to the inconvenient location of the garbage collection boxes and due to the usual absence of the rotating dump truck, the women usually throw the waste in vacant lots. They also said that they have to walk for long distances to throw household solid waste into the containers placed at one spot, as they are mainly responsible for cleaning the house as well as collecting and disposing the waste.

4.3 Possible Causes for Inadequate WATSAN provision

In poor areas where WATSAN is not sufficiently available, the main reasons for the poor women to bear the burden are several. The general characteristics of the problems indicate that the sources of the problems are deep rooted where the socio-economic status of the women plays a significant role. Among the major reasons for women to be affected by water and sanitation inadequacy are the rigid division of labour at household level, lack of income and not participating in WATSAN issues at kebele level. On the other hand, the non-application of the national gender and water related policies at all levels of the structure and restrictive budget are some of the main reasons on the service providers side.

First of all, the general picture of the division of labour in water and sanitation in the sample households will be reviewed.

4.3.1 Division of Labour in WATSAN

In all the study neighbourhoods the responsibility of fetching and managing water for the consumption of the household and as a means of livelihood is almost that of the women though there are times that they are helped by children, mostly girls, in fetching water when they are out of schools. The result from the questionnaire indicates that 97.5% of the respondents in the Temenja Yaj, 95% in Tureta Sefer and 90% in the Addis Ababa Bono area confirmed that it is women who fetch and manage water.

Among the respondents on which the study is conducted only seven said they get help from their husbands or a man living with them. Of these, a woman from Temenja Yaj neighbourhood has a sight problem and two women in Tureta Sefer have serious health problems. In the Addisu Bono neighbourhood, the men's share has been slightly high compared to the other neighbourhoods. This is because water fetching in Addisu Bono is done during night time and by going through bushes. In this informal settlement, three women confirmed that their spouse help in fetching water while another woman stated that the responsibility of her spouse is limited to giving escort to her with torch light during dark time. In general, for one or more reasons, the participation of men in fetching water is mentioned by only 5.8 % of the respondents.

In answering the question addressed to them related to division of labour, most women replied "Who else shall be? It is me" or in some cases "It is my daughter/ children", and "It is only we the women, the men never be willing to fetch". Such replies imply how much the task has exclusively been set for the women.

In sanitation case too, most of the responsibilities of keeping the household and the surrounding clean is women's duty including cleaning the latrine and managing the liquid and dry waste. They are not only the primary users of sanitary facilities but also largely influence household habits and overall use of the facilities. The collected data from the inner- city slums show that tasks associated with sanitation are rested on women except that men participate rarely on the collective effort to clean ditches in the neighbourhood.

At the Addisu Bono neighbourhood, too, sanitation is the responsibility of women with the exception of participation of men in digging wells of latrines and adjusting ditches for sewerage rarely.

They were also asked if there is a difference between men and women on being affected by inadequate WATSAN provision. The response of the vast majority, 82.2% of them were affirmative. What they ascertained on the focus group discussion, too, is that since they are more engaged in household chores related with WATSAN, and use water as a means of livelihood than men, they believe that women are more vulnerable to the effects of inadequate WATSAN.

4.3.2 Involvement and Demands for Better WATSAN Provision

The data shows that, apart from the household division of labour, non-participation of women in the effort to improve the WATSAN situation contributes to the worsening of the problem.

When assessing the extent of their involvement in water and sanitation provision, none of them were found to be part of Kebele committees to the betterment of their environment in general and WATSAN in particular. Out of total the respondents, 59.2% believe that they can't make a difference. Where as, 29.7% believe they speak of their mind to the Kebele officials, even if the Kebele doesn't respond to the poor water and sanitation features of the neighbourhoods. The rest, 11.1%, didn't want to comment. The only involvement mentioned repeatedly was what they contribute to clean their surroundings either by their own initiative or as part of once-in-a-while campaigns insisted by the Kebeles.

One of the questions incorporated in the questionnaire filled by the sample population requests about their requirement regarding WATSAN. The most frequently given response (by 14.2% of the respondents) regarding water, is the wish of the women if the government can find a way to either provide a private connection the charges for which could be settled in long term or provide additional public taps or shared connection.

In a similar manner, the frequently mentioned problems regarding water supply are the high frequency of water service interruption, a 4-5 days of non-water services, the restricted working hours of public tap-attendants and only the night time availability of water at Addisu bono neighbourhood. The other problem that has been pointed out repeatedly is the issue of uncontrolled cost of water charged by water vendors, which, according to the dwellers, needs an attention by the government.

The most common opinions regarding sanitation is the wish if more community latrines are built for the current condition of the most is poor. Many share the idea that people should work together to wards proper solid waste disposal as remedy to the problem of liquid waste flow. In addition to that, they have also indicated the contribution of poor solid-waste transportation system towards improper utilization of overflowing latrines. The addition of more liquid waste drainage ditches for storm water flow has been mentioned repeatedly as a remedy for liquid waste management problem.

Generally, solutions and opinions forwarded by all neighbourhoods indicate that most women expect the solutions to their problems to be provided by the government and NGOs.

4.3.3 Lack of Income and others: The Poor Women's View

The most common responses from the women, when asked as to why they are not getting adequate water and sanitation, is related to financial capability.

They cannot have connection because they can't afford it. They don't have enough money to build better latrines. Their capability to serve their needs of water by purchasing from vendors is limited because they don't have enough money to do so. The other water related problems of women in inner-city slums is the combination of the inconsistent availability of tap water and the restricted working hours of public tap attendants when the water is available.

Even if there may be a chance to get connected from an existing private water line at a lesser cost, the unwillingness of the privately connected ones can be a dead bolt.

The poor at their old age and suffering from sickness say that being lonely and helpless is one more reason. They say they are too helpless to have a line connected or a latrine constructed. The helplessness includes their physical and financial capability.

Moreover, unavailability of space or permit to construct the latrines makes the solutions very hard to get.

The night time only water service and interruption of the service in the mornings around the Addisu Bono neighbourhood has also been mentioned. The rocky nature of the neighbourhood, apart from requiring extra finance and labour on top of them being informal settlers, the high investment requirement of the hilltop nature of the area has been mentioned as a different case as compared to the two inner-city slums.

Figure 4.12: Not to Miss this Twice in a Day Chance of Getting Water. (Temenja Yaj:2007)

4.3.4 Budget Working Systems and Others: AAWSA and SBPDA's View

According to both service providers the reasons for the problems in Addis Ababa in general and poor areas in particular, extend from internal working systems of the organizations up to nationwide directives and policies. The non conformity between the fast growth of the city as compared to economic gain of the society and the low budgetary allocation for

service expansion are among the main reasons. The growing demand beyond the capacity of the service providers, the poor access (unsuitability of narrow, steep and unpaved roads for suction trucks) and lack of operational policies that clearly show the responsibility and accountability of service providers have also been listed as some of the reasons.

As mentioned earlier, another reason for the problem, especially on the sanitation sector, is absence of a clearly specified body in charge[27]. In relation to this, the lack of strong, transparent and effective linkage among the offices that address the sanitation issue in a non-uniform manner has been mentioned as a problem.

Some officials of AAWSA believe that the insignificant involvement of the private sector in the water and sewerage service also contributes to the problem. As the current water policy prohibits the involvement of the private sector in water source development. This is a challenge to the policy makers for there is a big political decision to make based on the findings whether any good will come to the developing towns and cities, out of the decision. Even though giving away the water sector development to private developers may result in positive effects such as infrastructural development, the fact that the poor is the most affected from shortage of water and that the uncertainty if the poor will be the beneficiary from the decision, makes the case unfeasible. The other problem, stated by the service providers, is the high cost of water and sewerage connection fees.

In addition, the poor concept of the society regarding sanitation, water conservation, rain water catchments and awareness on water saving and the poor experience on those have contributed to the magnitude of the problem.

Legal/tenure issues that constrain the ability of operators to deliver services in low income and informal settlements has been said to be categorized as those that contribute for inadequate distribution of water and sanitation services in Addis Ababa.

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[27] MoWR is responsible for policies laws and regulations, EPA and MoH initiate policies &laws regarding environmental protection and sanitation, respectively. AAWSA is responsible for water sewage while SBPDA agency deals with solid waste management, public toilets, greening, beautification, and cemetery.

Generally, all the reasons listed as constraints in the WATSAN service provision are technical and financial. But the problem has another feature, i.e, women not only because of their poverty, but also because of their gender, do not get full attention of the service providers. Therefore, the next section will servey the gender and poverty issues in AAWSA and SBPDA.

4.3.5 Absence of Gender Perspective

Absence of Gender Perspective in AAWSA

As mentioned earlier, there is a National Water Resources Management Policy, launched by the MOWR. This has a section on gender issues. There is also a document on Guidelines and Checklists for Gender Mainstreaming prepared by the same ministry. Despite this, it seems that these have never been used for the realization of gender equity, during designing programmes/projects.

Similarly, the Organogram of AAWSA has no structure or a unit attached to it that deals with gender issues, although this is said to be due to the technical nature of the service delivery processes. Nevertheless, it was realized that there are neither gender and poverty components nor an action plan for gender mainstreaming in AAWSA.

Regarding the managerial positions in AAWSA, the authority has a board to oversee its activities and is composed of eight members, but only one is a woman and this shows the under-representation of females, although women are very much attached to water. According to the information obtained from AAWSA, there are only few women (7 out of 35) at the management level. In addition, the management and other staff of AAWSA have never attended training programmes in gender and related issues (UN-Habitat & GWA: 2005, Panos Ethiopia: 2003).

Those situations, generally viewed, indicate that the organization considers the issue of water and sewerage in relation to its technical and financial aspects and not from the dimension of gender in reference to providing solutions.

Absence of Gender Perspective in SBPDA

Despite the fact that the agency gives priority of its services to poor un-serviced and/or low-income communities in general, there is nothing mentioned in its mandates as to how gender issues would be considered (SBPDA: 2003). Here, too, there is no any unit or division to deal with gender and poverty issues. The agency does not have an action plan for gender mainstreaming and there was no gender sensitization training programme ever conducted as well. Nevertheless, the agency targets slum dwellers to be main beneficiaries of its sanitation services, who are in the majority of cases women.

The SBPDA has a board to oversee its activities but there is no female member included in it. Among the 12 members of management of the agency, only one is a woman. There are 68 staff members out of which 14 are females. Out of the 15 professionals in the agency, only two are women and hence the participation of women in committees and playing decision-making roles does not seem to be realistic.

It was realized that there are no tariffs set for the sanitation services rendered in the city, but residents who have house connections of water are paying 5% of their supply costs through AAWSA's bills for sanitation services. Furthermore, emptying by vacuum trucks is paid by domestic customers and this amounts to a minimum of 69 Birr per service rendered.

On the other hand, the SBPDA makes efforts to organize micro and small enterprises, to engage in collecting solid wastes in the Kebeles and sub-cities. According to the agency, some 60 % of those performing the tasks are said to be females and hence creating employment opportunities for poor women.

CHAPTER 5: The Effects of Inadequate WATSAN Provision on Poor Women and their Coping Mechanisms

5.1 Effects of Inadequate WATSAN Provision on Poor Women

In the three neighbourhoods, women are living in a difficult life situation due to poverty accompanied by gender issues. They are impoverished as men but they also have additional burdens as women. The effects of inadequate WATSAN, one of the conditions which depict their poverty, shall be presented in detail in this chapter.

The effects by their nature overlap, sometimes difficult to differentiate and some are mentioned while discussing the WATSAN situation of the neighbourhoods in the last chapter. However, it's attempted to assess and discuss the effects under the following major topics:

1. Health
2. Income
3. Education
4. Safety, Privacy and Dignity
5. Social Relations
6. Time Management
7. WATSAN Use Behaviour and Satisfying Basic needs
8. Most Vulnerable Poor Women

5.1.1 Effects on Health

Inadequate WATSAN provision has a direct and immediate effect on health. It can lead to dysentery, cholera, typhus fever, typhoid, schistosomiasis (bilharzia) and trachoma (WHO & UNICEF: 2000).

Impoverished women in the three poor neighbourhoods suffer from continuous ill-health. All members of the family children, adults and elders are always victims. Owing to their poverty, they can't get treatment and cure easily. It is confirmed by this research that while such is a common problem faced by all family members, women are subject to health damage on account of their gender role. It is vividly stated that not only are they subjected to health damage, but also they are unable to get treatment when they are sick.

Water Related Effects on Health

In the city of Addis Ababa where a large number of dwellers enjoy an abundant amount of water in their compound, kitchen, baths etc. many others are suffering from lack of adequate water, which is the source of our life. Dwellers of the three neighbourhoods, which are the focus this study, are good manifestations.

The prevailed effects on health are two types in their nature-- external and internal. Poor urban women are subjected to internal health damage owing to drinking unclean water. The respondents were asked if they have encountered health problem related to water quality, most of them (86.7%) have responded that themselves and their family members have frequently suffered from stomach sicknesses such as typhoid and dysentery. But those ailments have not been defined to be water born or due to sanitation problem.

Among the external damages falling is the main problem. As they must travel a long distance to fetch water, 80.8% of the respondents stated that they sustained injury to their upper and lower limbs, knee, and/or waist falling once or more due to the heavy water they carry, rugged, hilly and sloppy nature of the land topography and/or due to darkness. Among the respondents that stated to have fallen, four of them (3.3%) are hurt to a point that they could not continue fetching water.

Though slipping down, sliding off and stumbling are common every where, it is a worse phenomena among women who travel every night in search of water at Addisu Bono. Worse enough the problem of the women goes beyond falling, fracturing or getting sick, but also the frequent breakage of their water containers make life difficult further. A woman from Addisu Bono stated that:

> I developed back pain since I started living here. A physician says it's kidney infection and the other physician also tells me that it is a problem of disk. However it's the problem I developed when I walk up and down this hill carrying this big jerry can [showing 20 litres of jerry can].

Respondent No. 39,Addisu Bono

Another woman also mentioned that:

> I have cardiovascular problem. After having passed the whole night waiting for my turn, I fetch only this much amount[28]. I couldn't mount the hill, and you can imagine if the container is bigger in size.

Respondent No.4 - Addisu Bono

Figure 5.1:
Early Mornings Scene on the Steeps of Addisu Bono.
(2007)

Inadequate WATSAN has impact/effect on pregnancy and child delivery, too. The situation that one of the respondents describes relates to this problem:

> "Carrying a jerry can of 20 litres and going this up hill is very difficult especially during pregnancy; bleeding used to come from me through my pregnancy period and I have delivered my child in difficult situation"

Respondent 1, Addisu Bono

This is again inconformity with the 2000 report of WHO/UNICEF/WSSCC which stated that the water carried by Sub-Saharan Africa women has great relation with maternal morbidity and mortality. The report also mentioned that water pitchers on the hips can

[28] She was pointing to 1o litres jerry can

cause difficulties during pregnancy, and explained pregnant women who use unclean sources for their sanitation are exposed to hookworm infestation, which inhibited child growth. Even though this study did not come up with this detail, the report also indicates that even the height of the tap stand has effect on the health of women's waist.

Sanitation Related Effects on Health

Sanitation is known to be considered as a private issue in most parts of the world (WSSCC& WHO: 2005). It is not openly discussed and is even considered as shameful. This appears to be stronger in our tradition. Poor living condition strengthens the impact on impoverished women especially on those who haven't got alternatives. They eat and drink like the men but they can't respond to the calls of nature whenever they need to as their home is so confined, the culture is tight and do not have proper latrine. Among women covered by this study, 82% answered to have been suffering urinary tract infection, haemorrhoid and constipation. In their response, they stated that males can get relief of by excreting by the side walk of a street or at any place where many people pass-by. For the women, however, this is shameful. They might pass the whole day without urinating being highly puffed up of urine for fear of some one could see them, which expose them to urinary tract infection. They will be nervous if someone see them urinating. Some one who sees them doing also feel indifferently to male and get disappointed at them and perhaps pass-by insulting them. This would even become more difficult when it comes to defecation.

As the results of focus group discussion and the administered questionnaire revealed, the vast majority of women have limited time for excretion. One is just early in the morning at the time when most people are not awake from their sleep and the other is at dusk following sun set when one can not identify the other that they sit for defecation. They made their body adapt to that.

Nearly 22% of women from the inner city slums and 12.5% in Addisu Bono, responded that they excrete during in the day time using bed-pan which they spill out or throw away

tying it in plastic bags. This is not only for day time and they do it also when they got sick or in any other when the need arises.

In the absence of latrines, most poor women have to use bushes which they can only do early in the mornings or hold it until it is dark. As a result, they are forced to control their intake of food resulting in many forms of under-nutrition and anemia.
The reason why women don't go to latrine or forest during night time is that they feel insecure (they are afraid of being raped, robbed and beat) and those in the informal settlement feel same not only because of fear of violence from men but also from the large number of hyenas in the forest.

Unless they use these two options (bed-pan and plastic bags) the waste either escapes them spontaneously or they will be exposed to hemorrhoid, constipation and urinary track infection because of repetition and long duration of the problem. For one or the other reason, they have back pain. This problem is especially more severe at the time of pregnancy, which requires frequent visit to latrine and as getting out at dark time exposes more to danger. One of the key informants, a young woman at the age of 28, married and a mother of four children, in the Temenja Yaj neighbourhood illustrates the situation. Her very narrow home appears to be covered in four walks. What the family uses as a latrine is a place with an old wall without door nearly to fall down used by more than 25 people.

> "Days I preferred to stay at home being highly puffed up of urine and excrement to sit for excretion at such very dirty place and to avoid crushing with men. When I am pregnant, I don't want to go to latrine though my urine comes frequently. It seems to me that the cover of the well sinks down taking me..... Overtime, I am suffering from constipation and have developed back pain".
>
> Key informant No.2 Temenja Yaj

Sanitation related health effects are not limited only to these problems. Most of the impoverished women have no formal employment or other firm job which helps them stay out of their home for long time, and even if they have, it's in a place saturated with

dirt like their house, the constant contact of dirt causes health problem to them. Especially those who pass their time, down to dusk, in household chores or wondering here and there in search of hunting for sources of income or spend most of their times in neighbourhood near refuses, coupled with bad hygienic behavior exposes them to damaging health problems.

5.1.1 Effects on Income

The study indicates that inadequate WATSAN is one of the major factors that exacerbate poverty in the three neighbourhoods.

Water Related Effects on Income

The economic capacity of the impoverished women is worsened in three ways due to the lack of water. One is that they pay much more than those who are connected privately[29]. The other is, whenever water provision interrupts those who depend on water for their livelihood loses their income. Thirdly, the sources of income will be affected when they get sick due to contaminated water, or other water related health effects which again incurs cost. The statement by one of the respondents from Tureta Sefer makes this clear.

> They tell us water and latrine pipes are merged.....I got sick. When I went to see a doctor, it cost me what I couldn't get back exerting my effort for two months. I pass days sleeping on bare bed. No income, no food!

Respondent 7, from Tureta Sefer

Among the women, the livelihood of 45.8% depends mainly on water. They generate income by making tea, brewing "*Tela*" and "*Areqe*", baking "*Injera*", which will be supplied to small restaurants mostly called "*Shiro Bet*", washing clothes, boiling potato, maize and grain as well as renting one of their rooms or even their only room and own bed. One of them also lead life by vending the water itself. Due to water interruption for

[29] See section 4.1 for more details

continuous days both in Temenja Yaj and Tureta Sefer, they can't manage to execute these activities which in turn lead to the termination of their daily income for days. The following two respondents illustrate the situation very clearly.

> I survive on the rent of a bed and unless the bed sheets are washed and the room is clean I don't get a renter, which means I could not feed my self.

Respondent No. 9, Tureta Sefer

Figure 5.2: No Water Means, No Income for this Woman whose Life Depends on Washing the Daily Labourers' Clothes. (Temenja Yaj:2007)

> I maintain the life of five persons washing clothes. If there is no water, I will have no daily income. If have no daily income, it means it's the end of everything. .....In this neighbourhood water is as expensive as gold.

Respondent No. 26, Temenja Yaj

The women lose their income not only when water interrupts, but also when they are late to go to their work after long queues or whenever they stop what they are doing for living to go to queue for water.

As it is stated by the women, 40% of the respondents stop baking injera for sale and fail to serve their customers tea, *Tella, Areqe*, roasted grain and boiled potato and they can't wash clothes when they go in search of water. Including these women, 65.8 % of the respondents have their income interrupted on account of waiting for their turn to fetch

water. They waste 30 minutes up to 3 hrs and even sometimes more than 3 hours[31] lessening, consequently, the income they earn from different sources.

Sanitation related Effects on Income

As the study indicates sanitation has a significant impact on income particularly when it affects health. The impoverished women get sick now and then because the life they lead is closely related to dirt and waste matters in one way or another. Like the health problem associated with water, inadequate sanitation exposes poor urban women for health hazards. Women lose money for treatment and if they don't treated their illness will force them out of job.

Storage Costs

Due to the AAWSA's limited hours of water delivery, almost all residents purchase storage containers. Participants in the discussion reported they have spent an average of 50 *Birr* on buckets, barrel or Jerry can, etc. for storing water. While this is a one-time cost, it is a significant portion of total household income for poor consumers. Also, as noted by some residents storing water also imposes indirect space costs; because the houses of poor residents are often very small, the space taken up by storage container is extremely valuable.

[31] The women are forced to wait for their turn sitting down at the water point for two reasons—unless they do it in person they will not get the water and/or their material for fetching water will be stolen.

5.1.3 Effects on Education

Studies conducted in different developing counties show that scarcity of water and poor sanitation has direct effect on education. The issue was reviewed in detail in chapter two. This study confirms the fact.

Among the respondents only 7.5% (Figure 3.5) are students. Unlike male colleagues, they need to help their household in managing WATSAN. Their response indicates that there are days that they miss classes while waiting for turns at the public tap or buying water from far places. Even if they don't miss class, they may feel dizzy from carrying heavy water container or waiting for their turns for hours at public stands which in turn affect their education.

Inadequate sanitation also affects poor girl's school work. As one of the key informants stressed adolescent girls prefer to stay away from school for at least a day or two every month for fear of being ridiculed by other students especially by boys.

With the scarcity of water, washing cloth pads regularly is a great problem for menstruating girls, not to mention washing themselves. Thus, some girls miss class because of bodily discomfort or fear of accidents caused by menstruation; others will go but will not participate actively in class. The same key informant's words show the situation of poor school girls from poor neighbourhoods.

> How can I be sure to stay in class for four hours while I went there before cleaning and make myself ready? ..... It is not during periods only. At this age girls need to keep themselves clean before going out to class. But, in a situation where there is no water and proper latrine or rooms to change, it is always embarrassing. I wish to stay at home whatever is the consequence.... We can not even depend on the school water and toilet mostly it is like our place.

Key informant No. 5, Tureta Sefer

5.1.4 Effects on Social Relations

As the collected data indicates the effects extend affecting their relations with others. Even if they struggle to adopt and live with the situation, there are various occasions when women involve in fight with their neighbours or even somebody new to the area. At water points, for example, it is common to quarrel over turns.

It is common to see disagreement between women living together on "no waste of any kind shall be dumped here" and "where shall it be dumped then?" arguments. There is also disagreement on who shall clean the common latrine, which is stated to lead to dispute and sometimes to a serious quarrel. The women who dare to inform the Kebele administration members about the deterioration for the hygiene condition would also face same problem. In addition to this, those with worse financial problems get the smallest respect even by fellow poor neighbours better than them for they have the smallest capability purchasing water and cleaning their clothes, themselves, their family, their houses and doorsteps.

From a broader view, those effects on community level, make the overall area a non-interesting slam of the poor. This may repel people with better living standards to live or work in those areas, which add up to continuity of the poverty in the areas. This in turn, by aggravating social inequity, exerts its worse on the highly affected poor of the areas, the women.

5.1.5 Effects on Security, Privacy and Dignity

Water Related Effects on Security

The impact of searching for water has a different face in the inner city slums. Except for those who have private connection, and those who fully buy water from vendors, all the other women are compelled to go long distance for water even at odd times. Consequently, security is also affected when poor women needs to use their only time for rest—sleeping. The poor women of

Addisu Bono neighbourhood, which is on the hill, gets water when all the lines going to the households behind Yeka Michael church are closed at mid night. The water manages to reach up the only public tap in the area after the majority of people down the hill finish their daily task, close taps and go to sleep. The public tap, again, stops to provide water between 5:00 and 6:00 am when those families living behind Yeka Michael start to use the water. Thus, households using these tap get to make line at every midnight. Those who are nearer to the tap get the service and return back home earlier and those who live far at the back of the tap come as early as midnight. Other wise, their chance of getting the water becomes slim. This situation has tremendous impact on the user's well-being. Some of the responses regarding this include:-

- "We are walking in the middle of hyenas and this always is frightening".
- "After getting so tired from the daily activities I can not relax by getting enough sleep. I have to leave my bed to go to fetch water at 1:00 or 2:00 every mornings. Life becomes more terrible in the rainy seasons".
- "When I went out to fetch water, the robbers entered my home and looted all my properties".
- "Whenever I go out to fetch water in the night, I worry not only for my self but also for my kid's safety particularly after hearing a case where a hyena got into the house and eat a child when the mother is out for water without closing the door properly".

Water Related Effects on Privacy and Dignity

Not to be able to access water any time, from the comfort of their place at an affordable price and as much amount as one need has more multi-faceted effect on poor women's privacy and dignity. One of the effects is robbing the pride of women. The following quotes show the bad feeling that lack of water causes on them.

"After I stayed the whole day at "*Gulit*"[32] and fail to fetch water, I feel ashamed and uncomfortable to ask my neighbours for water. They turn their back to me if I ask for their hard brought water. If I prefer not to be disappointed by their reaction, I may not have water to give my kids if even they get choked while eating food".

Respondent No. 5, Addisu Bono

The other problem that poor women face is the schedule and character of the public tap attendants. In all the neighbourhoods, the taps are attended by monthly paid controllers. The attendants sometimes fail to open the tap as scheduled if they do not have good relation with water users or if they can't mange it due to personal reasons. Their relationship, as one discussant explained, is similar to the relationship of landlords and servants.

It is not only public fountain user who can't get water at need but also users who are using shared connections. A large number of women living in rented house are forced to wait till the owners fetch enough or can't use the amount of water they need if their water expense is included in the rent of the house.

"The owners of the house always lock the water. I can't use it whenever I need to. I have to ask for their blessing whenever I want a single bucket of water. Things go worse if I want to wash clothes. So, I prefer buying from vendors every now and then".

Respondent No.15, Temenja Yaj

There are also women who can't get water, even though have money to buy, if the water vending point is closed. Also there are others who can't pay for the water they took in credit.

"A shop keeper used to sell me the water in credit. But there were times when I faced problem to pay back. One day he refused to give me more before I pay him. That night all the family went to bed without drinking a glass of water after dinner".

Respondent No. 4, Tureta Sefer

[32] Gulit is mini open market

Another cause that threatens their safety and dignity is the queues.

> "Even my husband couldn't understand this problem for me. Whenever I stay out for long time searching for water, then he picks a stick to beat me. He always asks "Where were you?", "Queue", I would respond. But he never believes me".

Respondent No.27, Tureta Sefer

Sanitation Related Effects on Security

For the question asked around whether or not they had faced problem of safety including rape, 8% women from the three neighbourhoods gave responses like "even if I didn't face, I know a woman who was raped", "My daughter was saved from rapists by passers by", "A drunken man thrown stone onto me" and "I was saved from a hyena" were common. Especially in Addisu Bono area, danger of eaten by hyenas were reported repeatedly. But the incident raised during a focus group disscussion in Temenja Yaj, is more serious than others.

> "Previously we used to go down to river to defecate. A latrine with six rooms has been built for us for which we hired a guard so that any body can not use it. However, it gets filled frequently. Seven months are away since we paid for it. The sucking car of the municipality has not cleaned it up yet. In the mean time, a woman of our neighbour, whose name I don't want to mention, went down to use the river bank and met by a person who has been living there in a plastic shelter he constructed. In recent days, he was warning people not to use the area claiming the place to be his residence. He caught and raped her then forced her to remove what she defecate in her *Netela* and dump it in the nearby container".

Extracted from FGD in Temenja Yaj

Sanitation Related Effects on Privacy and Dignity

The effects of inadequate sanitation on privacy and dignity of women begin with personal hygiene--particularly during adolescence, pregnancy, giving birth and the like. For example, whenever they wash or seen using any sort of piece of sanitary

clothes they used in front of others. Since they can not clean up themselves at any time they wanted to, they feel severely anxious.

> "Every month I feel uncomfortable about where to change, clean up and wonder whether others eyes are on me. There are even times I wished if God would exempt me".

Respondent No. 11, Temenja Yaj

> Whenever I become pregnant, I suffer form repeated vomiting. I live with a room-mate. I don't want do it in front of her. It is much worse to go to the latrine, and when I give birth; there is no water to wash my things or urine clothes and no place to spill the waste out without others seeing it..... and it is a big gift to be clean for a women.

Respondent No. 26 Addisu Bono

The impoverished women worry not only for themselves but also for the dignity of their children. Some try hard to improve the situation. The words of two ladies in Tureta Sefer tell some of them.

> How can our children understand the existence of a better life having grown in such situation experiencing eating and excreting at indifferent place? We are making them to give up hope in life at early age.

Respondent No. 18, Tureta Sefer

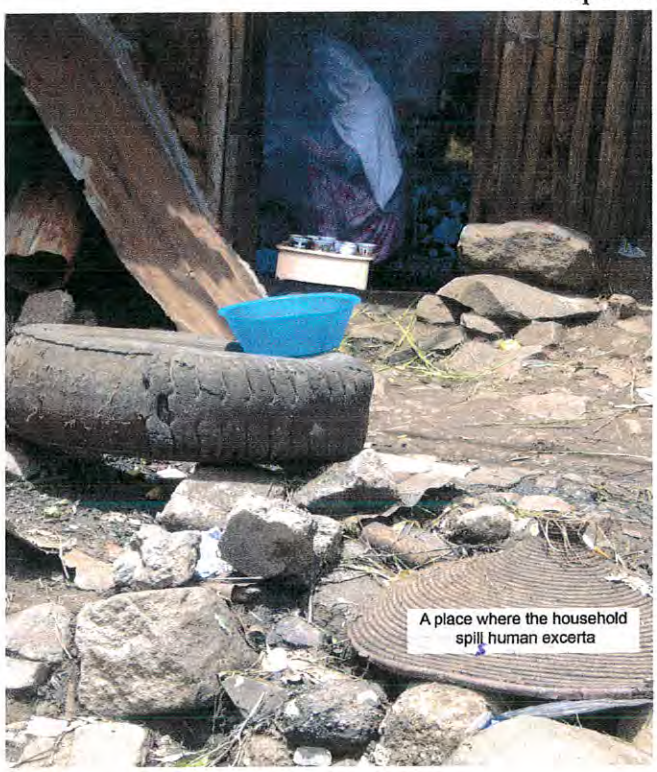

Figure 5.3: A Place where Poor Women's Dignity, Privacy, Social Status and Health is Endangered. (Temenja Yaj: 2007)

> We can't even enjoy the sun sitting in front of our gate. It is so dirty and smelly. My kids are always sick due to dirt all over here. Collecting plastic bags that contain waster matter thrown away over the night and cleaning up blocked ditches are one of my daily activities. If I don't do it and keep silent, who can come and do it for me. Sometimes I spend hours on it.

Key informant from Tureta Sefer

5.1.6 Effects on Time Management

The time women spend to collect water and the schedule of water delivery also has significant effect on the time they need for household chores, income generation or their rest and leisure time.

In the focus group discussions, the women explained that the water supply timing is a problem for most of them. The timings are not convenient for the women because it doesn't fit in with their daily morning routines where they have to see off kids to school, husbands to work, or busy with any other household work. These timings of water supply also create problems for women who have to adjust their work schedules and sleeping patterns. The fact that women of Addisu Bono neighbourhood are obliged to go into queue late at night starting from 12:00 pm to 7:00 am to get water, seven days in a week, shows the over all conditions and the degree of the problem.

The 45 min – 3 hrs (some times even more) wasted on queue also has an effect on the time they need for self improvement, to attend the other house hold chores or to rest. Walking long distances to search for isolated spots to defecate, too, has an effect on their time utilization. Moreover, the health problems the women and their families encountered due to poor WATSAN restrict women not to use their time for other activities.

All these, in turn, aggravate the poverty they are in.

5.1.7 Effects on WATSAN Use Behaviour and Satisfying Basic needs

The data indicates that inadequate WATSAN has vivid impact on water usage pattern. Lack even a glass of water at the right time of need, lead by the time schedule of the public tap attendant, forced to drink long stayed water, using water from well or river could be cited as examples.

An interesting thing in connection with their water use behaviour is that the privately connected and vendors don't open the tap during day time fearing "the water meter counts much." Thus, in all the neighbourhoods and particularly in Addisu Bono, it's only during morning and night that they can get water from private vendors.

It is also noted that, women who use source of water with low pressure consume less, and were forced to rely more heavily on vendors to meet their needs. The water found in this fashion or with more sacrifice will be used with great care. As expressed on focus group discussion, water won't be spilt unless it recognized that it will be used for nothing. For example the water used to wash glasses can't be used to wash kitchen utensils later on. One can imagine that how much this undermines the psychology make up of a person.

In poor urban neighbourhoods, there are also times that the importance of water goes beyond the conventional uses for drinking, cooking, cleaning, laundering and bathing in 'normal' life. In the studied resource constrained neighbourhoods, water is even crucial for stopping hunger and can be used to substitute food as the following excerpts convey:

> "When we couldn't find lunch or dinner, we pass the night by drinking water or coffee. We stop our hunger. The family will be satisfied when both what to eat and drink are prepared in large quantity even if it is poor quality. If there is no water, there is no way to have the poor quality even. Please, imagine what will happen to us and especially to our children when we are unable to get water. We can go to bed without eating just because there is no water."

Respondent No. 7, Tureta Sefer

5.1.8 Effects on Most Vulnerable Women

It has been discussed that the inadequate water and poor sanitation have created a tremendous pressure on poor women. This pressure is even bigger on the weaker ones, the old, the handicaps, HIV/AIDS patients as well as on the pregnant and lactating women.

Among the 120 women who were subjects of this study, seven were handicaps for one or another reason (for example, blind or gait); and eight of them were aged above 60. One woman was self motivated to state that she is HIV positive. It is evident from the responses given by all of them that their situation causes enormous pressure on their health, income, socio-cultural status as well as well-being and WATSAN use behavior than the poor but fit ones. Therefore, those who are and capable, they are obliged to always beg their neighbors or turn to somebody else that can help; or else they may be forced to apportion a significant share of their meagre income to pay to somebody who may fetch them water, lead them to latrine or to bush; or they always beg for some ones free help if they have nothing to pay for that service, which makes their life even more miserable.

One of the women with sight problem in Addisu Bono stated that when fetching water or heading for toilet, she can't usually avoid walking through both solid and liquid refuses and at her destination that are smeared by various harmful micro-organisms that may negatively affect their health. Falling and breaking injury are recurrent accidents encountered by her; and she has also mentioned that she doesn't walk to the nearby bush to execute her natural call fearing that she may be raped.

> I have no relative that I rely on to fetch me water. I am causing pain to my neighbours to get water. I have nothing to give them except my blessing words. Though I have totally given it up, I fell many times when I made attempts to fetch water by myself. As I am not comfortable with having excrete on bed- pan and have some one throw the content away, I discard it even if people may have a look at me.
>
> Respondent 6, Addisu Bono

Similarly, menstruating and pregnant women as well as those at their maternity period and lactating mothers are vulnerable. These women at the same time need more water and adequate sanitation.

5.2 Coping Strategies

The coping strategies used by the poor women to overcome the water and sanitation problems vary depending on the type, location and seriousness of the problems.

5.2.1 Coping Strategies for Water

One of the most common of all coping strategies identified in the surveyed poor urban areas is the mutual consideration to one another. This is the method they use to over come all types burdens of multi-faced poverty including water shortage. This involves demanding and getting water from neighbour; explaining ones problem and going to the front of the line; and to call one another to go where water is served late in the night. Particularly, the physically handicapped members of the society benefit highly from such mutual sharing and understanding of the problem.

Public taps are often broken or are inadequately maintained. This force neighbours to maintain good relations with households with private connection.

A constrained utilization of water is also the most common coping strategy used by all neighbourhoods. The saving has many features. The first is to prioritize the need, for instance, washing cloths is accorded less priority and not often done. The other is to use different water sources for different kinds of services. For example, they may use the hard-to-get tap water for cooking; while river water may be used for purposes like washing cloths, washing utensils, taking bath, and house cleaning. For example, one woman from Tureta Sefer mentioned that they travel as far as Bella River to wash their clothes with cleaner river water. This is a distance not less than eight km.

The other method is to accumulate and conserve water by all means. Thus, based on the size of the floor area of their houses (to keep water container) and their financial capacity (to afford buying containers of various capacities), there are women who own various containers ranging from 20 litre capacity jerry can to plastic tankers of 250 litres capacity or a steel barrel. Even if they do not buy it, there are some women who get it from relatives or friends. They also use whatever vacant household utensils, like cooking pots and kittle, to keep water.

More over, utilizing water wisely and conservatively, especially in Addisu Bono neighbourhood, includes harvesting rain water but this is done mostly during the rainy season. The other coping strategy used by the women to reduce their susceptibility to water vendors and maximize their chance of getting water is to regularly and carefully attend the public tap at all times.

The belief that "the water meter counts much in the day time" also uses as coping mechanism. They prefer to use their pipes early in the mornings or late in the evenings. Just like the variation of cost depending on the time, they also think that opening valve of the pipe to full caliber will increase the speed of the meter and hence the cost. Thus, they often slightly open it and let it take over half an hour to fill a single bucket.

The last option, for the poor women when water is not available from private connection or public tap, is to pay some of their hard earned money. Though buying water from water vendors costs much, it saves them from going to challenging and time consuming long queues or walking across steep up and down slopes carrying water. There are also circumstances when few better off poor, sick or women in difficult conditions may pay money to have water fetched and they may hire a taxi and travel to another locality when no water at all is available at their area.

5.2.2 Coping Strategies for Sanitation

For Latrine

The poor women overcome the shortage of latrines in such ways that overlook their dignity and security. One of the ways is to use bed-pan or plastic bag in their small house for which they will be forced to request members of their family, to leave the room. To go to the nearby river side or using the bushes as a shield is another option. Some women dig a small hole in the house and remove the waste quickly. Apart from this, it is a common practice to use neighbour's latrine (if it is better).

When the privacy of the latrine is the problem, they cover the open walls and doors of the latrines with any available material such as sacks and plastics and use the latrine. This is to keep their privacy. If that is impossible, then they rearrange their time to early in the morning or late in the evening. They often go in groups in fear of the darkness at such times.

Among the most uncommon coping strategies implemented when the worst case comes are to ask those with better latrines to allow them to use, to go to public latrines and if they are courageous enough, to pay 0.50 cents to use hotel toilets.

For Personal Hygiene

Mutual understanding is again the key in personal hygiene, too. Private activities including taking a shower or bathing mostly require quite hours when children are away to school and husbands to their work places. Otherwise, the rest of the family has to leave the room. Therefore, this is habitually done at times when most family members are not around. Locking from the inside makes it a reliably private for them. The other choice they have is using isolated place covered by sack, plastic sheet or corrugated iron sheet as a wall if bath is to be taken outside the house. Using easily washable and long usable piece of cloth during their menstruating period is also one of the ways they cope with.

For liquid and solid waste

In regards to liquid and solid waste, the most common coping strategy in the three neighbourhoods is co-operative cleaning. This is either self initiated or as per directives given by the administration of the local Kebele. But some hygiene minded women do clean frequently irrespective of the above schedules and some times report to the administration office when case gets worse. Moreover, damping the waste in the nearby river is the most common method in all neighbourhoods. While using the solid waste as compost to their garden is common in the Addisu Bono neighbourhood.

CHAPTER 6: Summary, Conclusion and Recommendations

6.1 Summary of Findings

This study took place in a context in which hundreds of thousands of poor women residents in Addis Ababa's slums and informal settlements have very poor access to WATSAN both in terms of quality and quantity.

In the case of water the study showed that the level of water provision for poor women is far from inadequate. This is shown from the fact that 80% of the sample population does not have private water connection. 15 % of the women travel more than half a kilometer in search of water. They wait in a queue for as long as 45 minutes up to three hours in a long line. Among those who have been interviewed, 60% of them disclosed that the quantity of water they get is never enough while 95.8% of them said they get the water for only 2 – 4 hours a day. In terms of affordability, it has been found out that those who buy from vendors pay as high as 9.1 times (915%) as compared to the AAWSA tariff. For those who use water as a means of income generation, their poverty gets aggravated when the service is interrupted. The case risks their survival when water serves as a substitute of basic needs like food.

The situation is relatively the same, in the case of sanitation. Those who use private pit latrine are found to be very few (7.5%). On the contrary, one third of the total sample population use bed-pans or plastic bags inside their homes. Among the women, 17.5% travel farther than 150 meters to get to the toilet. The shortage of finance and lack of space for the construction as well as denial for the construction permit has been listed as the major problems. In reference to liquid waste and sewage, the case is about releasing the waste but not confirming if it has gone to the right place. The information indicates that the health and dignity of those people is always at risk. Because it is common to throw either liquid or solid waste in any of the near by open ditches, on the road or river banks. With regard to bathing place and practice, they are not in a position to utilize water as they wish and usually in a very less private manner.

When the division of labour in WATSAN is observed, except for some occasions, managing water for the consumption of the household or as a means of livelihood is the task of women. For sanitation, too, most of the responsibilities of keeping the household and the surrounding clean is women's duty including cleaning the latrine and managing the liquid and dry waste.

The poor women have given their own similar reasons as to why they don't get adequate water and sanitation services. The main ones for water are shortage of financial capability, helplessness and frequent interruption of the service in the area. In regards to sanitation, similar shortage of financial capability, unavailability of space and denial of construction license for latrines have been mentioned as the main reasons.

This problem from service providers' point of view has its main reasons listed as the current non-private water source development policy, shortage of budget, lack of operating policies that clearly show the responsibility and accountability of providers. This is significant to sanitation sector for it doesn't have a clearly defined body or policy. In addition, legal/tenure issues are seen to have their effect especially on the service provision of informal settlements.

The absence of gender perspectives in the context of the service providers, too, has been discussed. As the findings show, even though AAWSA has a "social tariff" that has pro-poor aspect, it has no action plan to execute the nationally declared gender and poverty policies and gender mainstreaming. The same is true with SBPDA. There is nothing mentioned in its mandates as to how gender issues would be considered. No any unit or division or structure to deal with gender and poverty issues and, of course, no action plan for gender mainstreaming and there was no gender sensitization training programme ever conducted.

When assessing the extent of their involvement in WATSAN provision, none of them were found to be part of Kebele committees to the betterment of their environment in general and WATSAN in particular. The majority 59.2% believes that they can't make a difference and while 29.7% complained about non-responsiveness of the Kebele

administrations on the poor sanitation features of the neighbourhoods. Yet this research documented frequent case in points of neighbourly solidarity and collective efforts to improve the condition.

Poor women's needs and demands for better WATSAN provision was also discussed. Opinions forwarded by all neighbourhoods indicate that most of them wish if the government can find away to either provide a private water connection line the charges for which could be settled in long term or provide additional public taps or shared connection, the cost of water charged by water vendors to be controlled, more community latrine to be build and to get better solid and liquid waste disposal system. Most women expect the solutions to their problems to be provided by the government and NGO'S.

The next issue discussed in the analysis of the findings is the effects of inadequate WATSAN. Based on the collected data, the effects on health, income, education, safety, privacy and dignity, time management, WATSAN use behaviour, most vulnerable poor women and other well-being effects have been discussed.

According to the details of the study, 80.8% of the women have experienced a physical damage related to fetching of water. The extent of the damage ranges from slipping down, sliding off and stumbling to complicated fracture, difficult labour and problematic child-birth. In regards to sanitation, due to unavailability of latrines, 82.9% of them have been exposed to respiratory tract diseases like asthma, urinary tract infection/UTI/, hemorrhoid, back pain and constipation not to mention the effects on emotional health.

The analysis done regarding the effect on income generation indicates that 45.8% of respondents' means of livelihoods depend on water. Hence, due to lack of adequate water supply and the higher price they pay for it, a serious effect has been observed to have existed. Moreover, the 9.1 fold payment to the water they buy has made a tremendous effect on their income, too. The additional expense they have to incur due to health problems because of shortage of water has also been mentioned as high.

In reference to the effect of lacking appropriate sanitation on their income and its damage, the income loss due to wasted sick-time and the additional cost they have to bear for medical expenses during those periods have also been described as serious.

The other effect is the one induced on the education. Female students, who skip school due to the long time required while waiting for their turn to fetch water and those who reside in neighbourhood where the water is available during night time and be forced to feel too tired to follow their class properly have been indicated.

Regarding effects on their social relations, the quarrels in the long line while waiting for one's turn to take water as well as the attitude that develop during disposing of one's wastes after using a bed-pan while passer by is observing and even being watched doing the call of nature were the major.

The presented information also indicates the basic needs, security, privacy and dignity problems created on the women due to incomplete WATSAN provision are very high. Not been able to get something to eat unless there is water and when it is even crucial for stopping hunger and substitute food; choosing to eat less and at specific times to avoid having to go to the latrine during daylight; bad feeling from not being clean; feelings of insecurity (from the danger of being raped and/or beaten, eaten by hyena; and losing confidence about their bodies and about themselves from lacking privacy are among the major ones. The time wasted to fetch water has been described to have a big effect on their day- to- day time management, too. This goes on not only the day time but also in the middle of the night where poor women need to queue for water starting from around midnight up to 5:00 or 6:00 in the morning.

The study also indicated all the WATSAN related problems are much worsen on the poor women who breast feed, are pregnant, very old, HIV positive and disabled.

To cope up with such problems, the study has indicated that, the women use different methods starting from economic utilization and supporting one another up to many more strategies which have been detailed.

In general, the unavailability of these basic needs at the required quality, quantity, place, affordability, accessibility and safety has been strongly affecting the lives of poor women. They pay more and travel further for these services than their richer counterparts in formal settlements. It doesn't end here.

These interrelated effects highly influence the health, income, privacy, dignity, security, social status of poor women including the time they can use for self improvement. To mention just few examples from the findings, poor urban women, due to the problem of lack WATSAN facilities, have been fade up of their feminine gift of nature and wished to the extent of getting an exemption from god.

Furthermore, for women and girls in the slums and informal settlements of Addis Ababa, 'no water' often translates into 'no food'. Here water is not only used to prepare food, but also in cases of shortage as a substitute or a means of distributing whatever is available among family members. Thus, having water is often a requirement for women to ensuring that their families are actually fed.

The study also documented how poor women choose to eat less in order to avoid going to the bushes or latrines during certain times of the day. The research has in addition re-confirmed that the use of "Flying Toilets", which are common in most slums of African cities, is also widespread in the city of Addis, where poverty resides well guarded in a conservative culture and way of living. The case of the lady who has been raped while defecating by the riverside in the dark and forced to carry her own faeces indicates the seriousness of the WATSAN problem in slums and informal settlements of Addis.

This research again highlighted the interconnection of WATSAN, gender and urban poverty by indicating that on top of the overall shortage of water and insufficient sanitation provision in the city, the problem gets worse on the poor and it specifically worsens on the women of the society.

6.2 Conclusion and Recommendations

Conclusion

The findings of this study verified the fact that, without incorporating WATSAN in development efforts and without reducing social and economic burdens the success of changing the lives of the city's poor in general and the lives of poor women in particular is questionable.

The reasons for this are mainly to do with socio-cultural and economic factors. The status of women in the society including the rigid gender division of labour, inadequate access to economic resources and poor decision making power are the main causes.

Lacking voice in the provision of WATSAN is also another barrier. What is going on to improve their WATSAN condition is almost out of poor women's hand. They are grateful if they be given such services, if not they do not know whom to blame exactly if things get worse. In most cases their only hopes are either the government or NGOs. The only involvement mentioned repeatedly is what residents contribute to clean their surroundings either by their own initiative or as part of once-in-a-while campaigns insisted by the Kebeles.

Women's lack of decision making power continues its way up to the organizations that provide WATSAN services. Almost no women in the managerial positions of AAWSA and SBPDA mean no gender representation and, hence, it is likely that without proper consultation and debate policies and decisions that can affect the needs and demands of poor women can be made.

The problem also has other root causes that partly to do with the legal framework and its application. As repeatedly told, many policies that can be spotless at all levels, especially the relevant rules and regulations in the water sector, including gender mainstreaming guidelines, have not been passed down to the executive level and converted into action plans.

The lack of adequate service also has partly to do with the limited financial resources of the various stakeholders, and how spending is prioritized. To date, the provision of WATSAN services has been following a non-systematically coordinated and a single case at a time oriented style of working procedure.

Moreover, there is an evident lack of planned interventions, or regulation of service provision by pertinent authorities, partly because they are under no legal obligation to provide services to particularly informal settlement dwellers.

The prohibition of the involvement of the private sector in water source development in the current policy was also mentioned, from AAWSA side, as aggravating the problem, but the researcher argues that privatization will further hardships for poor women and their families based on the experiences of other cities in the developing world. According to Memon and Hirofumi (2002), the privatization of water services in many cities and regions in the world has been initiated at the insistence of international financial institutions and tied to loan conditions, structural adjustment programmemes, poverty reduction strategies and international development assistance and that has led to hikes in water bills, the cutting off of water supplies, an increase in health problems and an increase in corruption.

It is clear from the findings that poor sanitation and water supplies are interrelated engines that drive cycles of disease, poverty and powerlessness in poor areas of Addis Ababa. In the case of sanitation, however, the circumstances are worse. It lags far behind the water sector. The lacking of a fully responsible authority for sanitation and its own space in the Ethiopian policy documents, despite being such an important area, makes the problem a national one rather than the city government case. Whether it is in better serviced parts of the city or impoverished areas, sanitation involves difficult issues of taboos and shyness that ranges from the community level up to the policy makers.

One of the reasons is that sanitation is "a dirty word" and a private matter in our society. Many people, including politicians, seem to prefer other more pleasant topics. Actually,

this lack of recognition is reflected not only at the neighbourhood, the city or national levels but also in the absence of a target for sanitation among the Millennium Development Goals, to match the water target33. It may be one of the reasons why sanitation is given a low priority.

The problem is real, immediate and is indeed one of the most important development challenges facing the city. Who can argue against measures to ensure that all of humankind has safe water to drink and decent sanitation? So, action to improve WATSAN situation is an important step to improve the life of the poor people in general and poor women in particular. But until then, the lack of these services in slums and squatter settlements of Addis Ababa have been killing poor women. The prevailing situation necessitates the proper attention if the life of urban poor women has to be changed by empowering them socially, economically, politically, physically and emotionally.

Recommendations

The researcher recommends the following points based on the findings of the study. Many of the recommendations illustrate the complexity of living in large but poor city where there is no a single approach and institution for creating poverty-free, equitable, and sustainable city. Hence, the recommendations, by suggesting immediate solutions express the need for an integrated and multi-sectored approach to gender mainstreaming in the institutions, programmes and projects of the WATSAN overall management.

- It is well known that without major expansion in the supply of water it may not be possible to meet the existing need and provide adequate water to all sectors of the society. However, parallel with expansion of the service, attempts need to be made to evenly distribute whatever is available among all residents and neighborhoods of the

[33] Retrieved from http://www.sanicon.net/themes/intro.php3?theme=1

city irrespective of their economic, social and legal status and location. To realize this, therefore, it might be necessary to adopt quota and/or shift system.

- Another major intervention area particularly in the water sector is to exert efforts to efficiently and effectively utilize the produced water. This involves replacement of old water supply lines that cause substantial water loss as a result of leakage; awareness creation campaigns to promote the idea of efficient use of water; and development of other controlling mechanisms to minimize water wastage particularly by some affluent residents and institutions.

- It is also important to create awareness among residents and encourage the idea of harvesting and use of other sources such as rain water for laundering, washing cars, watering gardens and other domestic uses.

- Regarding sanitation, it is a crucial issue in its own right which needs improved attitude, clear institutional home and owner as well as budget. Coming out of being a private matter, it needs to get the status of key areas of concern for sustainable development of the city; Therefore,
    - Operational policies that clearly show the responsibility and accountability of the service providers need to be formulated;
    - All inhabitants of Addis Ababa in general and those who live in poor areas in particular should be made aware of the impact of inadequate hygiene and sanitation. This involves teaching citizens to change attitude towards the concepts of hygiene and sanitation.
    - Strong, transparent and effective linkages between water and sanitation agencies and the urban poor should be in place.
    - More communal toilets should be built in congested slum and squatter settlements and appropriate technology in the supply of sanitary services should be adopted.

The above being recommended to give immediate solution to the existing WATSAN service problems, the following is suggested for long-term solutions.

- AAWSA and SBPDA need to revise existing documents pertinent to WATSAN issues and see them from poverty reduction and gender equity perspectives to facilitate the delivery of WATSAN services with affordable charges and at reasonable distances and relieve the poor, particularly women from paying higher rates and traveling long distances;
- FDRE and AACG need to reform planning acts and local by-laws to recognize slums and informal settlements as an integral part of the urban structure and start providing them with much needed basic services;
- The AACG needs to enhance the effective implementation of the slum and squatter settlement up-grading programmes and involve poor women and men starting from the programme inception or project design stages.
- AAWSA, SBPDA and EPA must revise the existing policies, strategies, laws and thereby reinforce or incorporate gender issues and formulate workable implementation strategies and need to establish gender focal units in the respective organizations;
- WATSAN projects and programmes that treat women as beneficiaries and users, and not as managers and decision-makers, hamper their results and diminish women's position. Therefore, advocacy, awareness-raising, and information exchange on gender issues should be effected at different levels including senior personnel in relevant institutions as well as communities, local and federal government.
- On the issues of privatizing water, the option should be discussed publicly with all stakeholders. Information and relevant documents should be available to all and especially poor women. All discussions should take place in an open, transparent and inclusive manner.

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Appendix 1: QUESTIONNAIRE FOR HOUSEHOLDS SURVEY

Case Study Area ----------

Sample No. ----------

Date ----------

Interviewer ----------

I. General information

1. Name of Interviewee_____
2. Name of Household Head (if other than the above)_____
3. Sub-city _____ Kebele: _____ House No. _____
4. Physical Status_____

II. Household Characteristics

5. Age of respondent_____
6. Sex of respondent _____
7. Marital Status of respondent
   a. Single b. Married
   c. Divorced/Separated d. Widowed
8. Education level of respondent
   a. No formal education b. Primary school e. Other
   c. Grade 8 Complete d. Grade 12 complete
9. Type of household composition
   a. Single HH head e. Couple and dependent children
   b. Single HH and with children & adults f. Couple sharing with friends and relatives
   c. Single HH and children g. Other
   d. Couple

III. Household structure

10. No. of households in the housing unit_____
11. Total Household size _____
12. Total dependent family members _____

IV. Housing characteristics

13. Tenure Status

a. Owner Occupied b. Rented from Kebele e. Other
c. Rented from Private HH d. Rent Free

14. Type of Construction Materials

a. Wood and mud
b. Cement Blocks
c. Wood &Thatch
d. Other

15. Size of the House

a. One room
b. Two rooms
c. Three rooms
d. More than three

16. Quality of the house

a. Very good
b. good
c. Very Poor
d. Poor

IV. Occupation and Income of Household

17. Total No of earning household members _____
18. Employment status of the head of Household head

a. Employed
b. Unemployed
c. Retired
d. Disabled

19. Employment type

a. Civil servant
b. *Gulit Negade*
c. Daily labourer
d. Commercial sex worker
e. Student
f. Beggar
g. Other

20. Total income of the head of the household

a. < 200*Birr*/month
b. 200-300/month
c. 300-400/month
d. 400-500/month
e. 500-600/month
f. > 600/month

21. Total earnings of other household members (*Birr*) _____
22. Total Household Income (*Birr*) _____

V. Household Expenditure

Expenditure type	Amount (*Birr*)	Expenditure type	Amount (*Birr*)
Food		Clothing	
Fuel		School fees	
Water		Transport	
Sanitation		Household goods	
Rent (if applicable)		Others (please specify)	

After filling out the above roster the following questions can be coded after the interview is over

23. Total household expenditure per month (*Birr*) _____
24. Total household expenditure on water and sanitation (Birr) _____

VI. Water Supply Situation

25. What is the primary source of water for members of your household?
    a. Private connection
    b. Shared connection in the compound
    c. Private vendor
    d. Public tap
    e. Protected dug well
    f. Unprotected dug well or spring

26. If the source of water is other than piped water inside the house, what is the reason for not having private connection?
    a. I (we) can't afford
    b. The house owners aren't willing
    c. The settlement is informal
    e. Other (specify)

27. If the source of water is private vendor(s), how much do you pay?
    a) Per *Baldi*----------
    b) Per jerry can----------
    c) Other containers--------

28. If the source of water is public tap, do you get the service whenever you need it?
    a) Yes
    b) No

29. If not, what are the major problems in using public tap? (opening times, queue, the relation with tap attendants.....)
    a) ----------
    b) ----------
    c) ----------

30. If the source of water is dug well, what are the major problems in using? (Availability, its effect on health, security.....)

    ----

31. How far is this source from your dwelling?
    a. In premises
    b. Less than 50 meters
    c. 50 m - 100 m
    d. 100 m - 500 m
    e. More than 500 m

32. If outside premises, how long does it take to get there, get the water and come back? (Number of minutes) ----------

33. Who fetches water in your household, how is that decided and why?

    ----

34. How do you transport water?
    a) Carry (yourself)
    b) Carry (family member)
    c) Carry (paid person)
    d) Transport by Donkey

35. If you pay for carrying water, how much is...
    a) Per *Baldi*----------
    b) Per jerry can----------
    c) Other containers----------

36. With what kind of container is the water brought in? (capacity, shape, name, etc)
    Name_____ Shape _____ Capacity _____

37. If you are the one who carry water, do you think you have encountered any health problem as a result of fetching water?
    a) Yes
    b) No

38. If yes, please explain

---

39. How do you rate the place where you fetch water and the way to get there and back home in terms of security?

a) Very good c) It depends on the time

b) Good d) Dangerous

40. If your answer is either it depends on the time or dangerous, please explain

---

---

41. Are you exposed to any dangers when fetching water?

a) Yes B) No

42. If yes, please explain

---

43. Can you get water at any time of the day? a) Yes b) No

44. If not, explain

---

45. Do you think the time you spent to fetch water has impact on your income? (for example spending much time there instead of engaging yourself in income generating activities)

a) Yes b) No

46. If yes, please explain

---

47. Do you think the time you spent to fetch water has impact on your domestic task or leisure time? (for example spending much time there instead of engaging yourself in other chores)

a) Yes b) No

48. If yes, please explain

---

49. Do you think you can get (use) water easily in any situation you are in? (during menstruation, pregnancy, child birth, sickness, disability…) a) yes b) no

50. If not, please explain why?

---

51. If not, please explain what alternatives do you use?

---

52. Are there different uses for water from different sources? Why?

---

53. Do you use water for household purpose only? (drinking, cooking, washing---)

a) Yes b) No

54. Do you use water for commercial purpose? (Cooking for sale; washing clothes for money; preparing drinks for sell…) a) Yes b) No

55. If yes, please explain----------

- ----------

56. If you use water for commercial purpose, is it your main source of income?
    a) Yes b) No

57. What is the daily water consumption of the household (liters)? ----------
    a) < 10 litres b) 11-20 c) 21-30 d) 30- 40
    e) 40-50 f) 50-60 g) >60

58. What do you think about the availability of water?
    a) Always sufficient b) Insufficient sometimes
    d) Insufficient most of the time e) Insufficient at all times

59. How much time do you need to collect water?
    a) 5 minutes d) 30-45 minutes g) 2 - 3 hours
    b) 5-15 minutes e) 45 minutes -1hour h) More than 3 hours
    c) 15-30 minutes f) 1 - 2 hours

60. What do you think about the quality of water?
    a) Very good d) Poor
    b) Good e) Very poor
    c) Average

61. If the quality is poor, what do you think the reason could be?

    ---

62. Have you encountered any water borne disease from this neighbourhood?

    ---

63. What do you think about the pressure of water?
    a) Very good b) Good
    d) Weak e) Very weak

64. Are there any problems with water supply?
    a) Yes b) No

65. If yes, what is the major problem?
    a) Intermittent b) Poor quality c) Expensive
    d) Source is too far e) Long queue

66. If the problem is long queue, how long does it take you to get turns?

    ---

67. Are you happy with the volume of water supplied?
    a) Very good b) Some times too small
    c) Good d) Always too small

68. Is the supply (availability) of water differs from time to time? (Fore example in the mornings, daytime, evenings, nights, during holidays)

    a) 24 hours available b) Available most of the day
    c) Unavailable some times d) Available only for few hours

69. Please explain the extent of its effect on you?

---

70. If water quality is a problem, please explain the extent of its effect on your health?

---

71. If the household is privately connected to AAWSA, how much do you pay monthly for water?

a) < Five *birr* b) 5-10 *birr* c) 10- 15 *birr*

d) 15-20 *birr* e) More than 20 *birr*

72. If your household is not privately connected to AAWSA, how much do you pay monthly for water?

a) < Five *birr* b) 5-10 *birr* c) 10- 20 *birr*

d) 20-30 *birr* e) 30-50 *birr* f) More than 50 birr

VII. The Sanitation Situation

73. What do you understand by the term 'sanitation'?

---

74. What kind of toilet facility does your household use mainly?

a) Bed-pan
b) Plastic bag
c) Bush
d) Private pit latrine
e) Shared pit latrine
f) Public latrine
f) Others (please specify)

75. How far is the facility from your home?

a) Less than 50 meters
b) 50 -100 meters
c) 100-150
d) More than 150 meters

76. How many people share the toilet?

a) Less than 5
b) 5-10
c) 10-15
d) More than 15

77. Who is responsible for cleaning your toilet?

a) Me
b) My mom
c) All adult users
d) Others

78. How often are they cleaned?

a) Twice a day
b) Daily
c) Twice a week
d) Once a week
e) Once in a while
f) Never

79. How do you rate them in terms of cleanliness?

a) Very good
b) Good
c) Dirty
d) Very Dirty

80. Is it affordable? Availabile?

a) It is affordable
b) It is expensive
c) It is affordable, but not easily available
d) It is not affordable and not easily available

81. How much do you pay for the maintenance and emptying of it?

a) 100- 150 *Birr* b) 150-250 Birr c) More than 250 *Birr*

82. Do you think you can relieve yourself whenever you want to in any time of the day?

a) Yes b) No

83. If your answer is no, please answer the following two questions:

84. Why don't you relieve yourself whenever you want to?

---

85. Do you think you have encountered any health problem as a result of this?

---

86. How do you rate the place where you relieve yourself in terms of privacy and dignity?
    a) Very good
    b) Tolerable
    c) Not tolerable

87. If your answer is not tolerable, please explain

---

88. How do you rate them in terms of security?
    a) Very good
    b) Good
    c) It depends on the time
    d) Dangerous

89. Are you exposed to any dangers when using them?.
    a) Yes
    B) No

90. If yes, please explain.

---

91. Do you think you can use them in any situation you are in? (during menstruation, pregnancy, child birth, sickness, disability…) a) yes b) no

92. If not, please explain why?

---

93. If not, please explain what alternatives you use in times like these or in a situation when you can't use the main one? (for example when it is full or too dirty)

---

94. How do you rate them in terms of security?
    a) Good
    b) It depends on the time
    c) Dangerous

95. Are you exposed to any dangers when using them?.
    a) Yes
    B) No

96. If yes, please explain.

---

97. Do you use public /community toilet?
    a) Yes
    b) No

98. How do you rate them in terms of cleanliness?
    a) Very good
    b) Good
    c) Dirty
    d) Very Dirty

99. If you use public/ community toilet what is the good and bad side of it other than cleanliness?

---

100. If you have problem in having moderate toilet facility (near, clean & that keeps privacy and dignity), what is the main reason not to have a better one?
    a) I can't afford
    b) No enough place to dig pit
    c) The owners are not willing
    d) I (we) can't get permission from authorities
    e) I have no male figure to help me (in the case of FHH)
    f) Other (specify)----------

101. If the answer is not having a male figure to help (for example in the case of FHH), please explain

---

---

102. Where do you take bath?

a. Inside the house, separate place used by this household only
b. Inside the house, separate place for the shared use
c. Outside the house, covered place used by this household only
d) Outside the house, covered place for the shared use
e) Outside the house, uncovered place
f) I don't have specified place to take bath

103. Do you think the place you take bath protect your privacy?

a) Yes B) No

104. If not, explain?

---

105. Has any member of the household suffered from the following diseases in the last 3 months?

a) Diarrhea
b) Cholera
c) Typhoid
d) Other parasitic infections (specify)----------

106. How do you dispose your garbage?

a) Public garbage service
b) Private garbage service
c) Throw in vacant lots
d) Throw in river
e) Burn and/or bury
f) Other (specify)

107. Who disposes the garbage in your household?

a) Me
b) My mom
c) All adults in the house
d) Others

108. How many households share the same refuse the same refuse container/pit?

a) Less than 10
b) 10-20
c) 20-50
d) 50-100
e) More than 100

109. Where do you dispose off water from bathing, laundry and cooking?

a) Nearest Ditch
b) On the road
c) Open drainage
d) others (specify)

110. What problem (if any) do you have with disposal of waste water?

---

111. How often are these drainage facilities cleared?

a) Very often b) Often c) None

112. Do you feel that you have a voice in the delivery of water and sanitation service?

a) Not really
b) I raise my voice whatever the result be
c) I know I can bring a difference
d) Other

113. Are you (or your household) involved or have been involved in WATSAN project/ committee?

a) Yes B) No

114. If yes, how? If not, can you describe its impact?

---

115. If not, can you describe its impact?

---

116. What is your opinion of the following's provision of water and sanitation?

a) Addis Ababa City Government----------

b) Sub-city and Kebele administrations----------

c) Private sewer services (eg. Septic tank emptying companies)----------

d) Others----------

117. How do you rate the water and sanitation conditions of this neighbourhood over the last five years?

a) It is going better b) It has no change c)It is going worse

118. Can you explain the impacts of lack of water and sanitation on your income, personal hygiene, security, time, privacy, dignity, health....?

---

119. How do you rate problems related to the following (very important, important and not important)? Please rank them in the order you believe should be solved.

	Rank
Water Supply	
Sewerage System	
Education	
Street Lighting	
Solid Waste	
Health Services	
Toilet Facility	
Other (please specify)	

120. Are there any improvements that you would like to suggest to reduce your vulnerability in water and sanitation?

Dear interviewer,

Please record the level of cooperation of the respondent during the interview

Bad ..... 1 Good 3

Fair ..... 2 Very good 4

Appendix 2: Checklist for Conducting FGDs & Key Informant Interviews

1. How do you explain being poor women?

---

2. Is there a level of difference in being poor?

---

3. If yes, describe them?

---

4. What are the sources of drinking water in your area?

---

5. Are the water sources accessed all the time?

---

6. Do you get water all the time?

---

7. How is the quality of water that you use for household consumption?

---

8. Is the payment or water charge affordable?

---

9. Who in the household is responsible for fetching water?

---

10. Who in the family is responsible for handling water?

---

11. How far is the water point from your residence? ---

12. Is there any danger to women when accessing water? (health, security....)

---

13. What do you do when there are shortages or lack of water?

---

14. .Are there water and sanitation committees in your neighbourhood?

---

15. Do your neighbourhood use water as a means of livelihood?
If yes, explain.

---

16. Where do residents defecate?

---

17. Do you have public/ community latrines in your area?

---

18. Are these facilities adequate and accessible by all residents, including women, children and the disabled?

---

19. Do you use hotel toilets?

---

20. How do residents dispose their wastes?

---

21. Do you pay for sanitation services?

---

22. Are there structures and mechanisms for your involvement in decision-making on WATSAN issues? Yes ---------- No ----------

23. Are women and men equally represented in WATSAN committees?
Yes. _____ No._____

24. Were there any awareness creation programmes on WATSAN issues conducted in your area?

---

25. What are the linkages between water and sanitation provision and your life style?

---

26. What is the cost of inadequate WATSAN services for you?

---

27. Do you think you are vulnerable to the effects of inadequate WATSAN by being women?

---

28. What are your views as regards to overall service delivery in your area?

---

29. What are your needs and demands for better WATSAN provision?

---

30. What are your views regarding solutions to the problem of WATSAN in your area?

Appendix 3: Checklist for Conducting Interview with Kebele officials

Please give answers by disaggregating data on gender basis.

1. What is the total population of the Kebele? _____
2. What is the population density per sq. meter? _____
3. Do you have any data to show the population growth rate in the Kebele?_____

   If yes, how much is it? _____
4. What is the trend of migration in and out to the Kebele? _____
5. What are the major sources of income of the residents in your area?

_____

_____

6. What is the rate of unemployment/under-employment in the Kebele?

_____

_____

7. What is the literacy rate in the Kebele? Female_____
   Male_____
   Total_____
8. What type of water sources do you have in your area?

_____

_____

9. How do you rate the availability and quality of drinking water in the Kebele?

_____

_____

10. Do you have adequate sanitation services and infrastructure in your Kebele?

_____

_____

11. What are the major constraints for adequate water and sanitation in the area?

_____

_____

12. Who are the providers of water and sanitation services in your Kebele?

_____

_____

13. Are there NGOs operating in your area? In what capacity?

_____

_____

14. Do you think the service providers consider gender issues in their programs?

15. Are there water and sanitation related health problems in your Kebele?

16. Who are most affected in this connection and how do they access to health services?

17. Are residents involved in the management of water and sanitation services or facilities?

18. What is the role of women and men in the utilization and management of WATSAN services?

19. What is the involvement of women in this regard?

20. Does your Kebele has gender sensitive water and sanitation program? If yes, what?

21. What is the representation of women and men in the Kebele?

22. What does the Kebele administration do to help poor women in their status of WATSAN?

23. What are the Kebele plans to provide water and sanitation?

24. Do Kebeles have gender Sensitive water and sanitation programmes?

25. If yes, what?

Appendix 4: Checklist for Conducting Interview with AAWSA and SBPDA officials

1. What is the status of WATSAN provision in the slums and informal settlement areas?

---

2. What are the constraints in WATSAN provision in the city in general and poor areas in particular?

---

3. Does the water tariff consider the living condition of the poor?

---

4. Are there any pro-poor policies in place?

---

5. To what extent does the organization addresses gender issues?

---

6. What plan do you have in improving WATSAN provision in the poor urban areas?

Declaration

I declare that this thesis is my original work. It has not been presented for a degree in any other university and that all sources of materials used for this thesis have been duly acknowledged:

NIGIST SELFU		23/08/07
Name of student	**Signature**	**Date**